The Influence of the Advancement Via Individual Determination (AVID) Program on Student Performance Measured by College Readiness Standards

A Doctoral Thesis Presented to the

Faculty of the College of Education

University of Houston

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Education

in Professional Leadership

by

Jonathan Campbell

July 2015

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ACKNOWLEDGEMENT

To my wife, Susanna, thank you for believing that I was strong enough and smart enough to finish this endeavor. This achievement would not have been possible without your support and I will be forever grateful.

To my children, Elizabeth and Samantha, I dedicate this dissertation to each of you as an example that no matter the perceived roadblocks or insurmountable excuses, you can achieve. Never be afraid to try, as not even attempting is far worse than failing at something. Some of the best ways to learn is to fail then get up, wipe the dust off and try again.

To my parents, Joe (Dad) and Beverly (Mom), thank you for raising me with moral values and ethical principles that have come to define me. It is an honor to be the first in our family to graduate from college and your supports were a driving force of my successes.

To my thesis chair, Dr. Steve Busch, I will be forever grateful for the helpful and encouraging environment that you created that ultimately led me to successfully complete this research study. Without you, I surely would have quit many moons ago.

To the rest of my committee members, Dr. Angus McNeil, Dr. Wayne Emerson, and Dr. Robert Borneman, thank you for challenging me along the way with insightful questions and viewpoints. This research study would have been a shell of this final product without your dedication of pushing me further than I thought possible.

To the AVID teachers at Atascocita High School, your dedication to our economically disadvantaged and First Generation College bound students is awe-inspiring. Continue to believe that you are making a difference, one child at a time.

To the students that I have come to know over the past 15-years, you are the reason for my continued pursuits to endure in bettering myself. Never stop learning.

The Influence of the Advancement Via Individual Determination (AVID) Program on Student Performance Measured by College Readiness Standards

An Abstract

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Campbell, Jonathan. “The Influence of the Advancement Via Individual Determination (AVID) Program on Student Performance Measured by College Readiness Standards.” <Published or Unpublished> Doctoral Thesis, University of Houston, August 2015.

Abstract

African Americans and Hispanics may experience double isolation as a result of the attributes of race and poverty and predominantly attend schools with far greater numbers of low-income students than white or Asian students (Siegel-Hawley & Frankenberg, 2012). The Texas Education Agency reported that 60.3% of students enrolled in Texas schools are considered economically disadvantaged (TEA, 2013). The President’s Advisory Commission on Educational Excellence for Hispanic Americans (2003) stated that the United States will suffer significantly in “lost tax revenues, lower rates of consumer spending, reduced per capita savings and increased social costs” (p. 3) due to a growing uneducated workforce. Many educational leaders look to support programs such as Advancement Via Individual Determination (AVID) Program on High Student Achievement that is designed to close the learning gaps for economically disadvantaged students.

The purpose of the study is to determine if significant differences exist between AVID students and non-AVID students, in grades 9-12 regarding whether they achieved math and English TAKS commended status, PSAT scores, frequency of AP exams taken, and AP exam scores. Matched and non-matched pair samples were used with a parametric independent samples two-tail t-test and a Pearson chi-square to determine if statistically significant differences exist between AVID and Non-AVID student

achievement scores and levels. Additionally, this study sought to determine the perceptions of AVID teachers and the principal regarding the effectiveness of the AVID program.

In the finding of this study, AVID and non-AVID students reported statistically significant differences on 19 of the college readiness standards reported from the math and English TAKS, PSAT, and AP exams. Conversely, no significant differences between AVID and non-AVID students were reported on the 5 following college readiness standards: both matched and non-matched English TAKS commended status, non-matched PSAT writing skill scores, and frequency and scores on AP exams. Moreover, AVID students performed just as well or better in 6 college readiness standards than non-AVID students. Additionally, this study found that the perceptions of teachers and administrators with regards to the AVID program reported teacher effectiveness, administrative support, substantial professional development offerings, and positive student motivation as important elements to closing educational achievement gaps. Also, this study found students needed to be exposed to a college-going atmosphere with a cultural mindset of educational achievement through rigorous coursework. Lastly, this study realized a college readiness preparation indicator program would be beneficial to monitor student progress.

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Chapter 1

Introduction

Enrollment patterns in schools in the Southern United States have shifted from mainly African Americans and whites to African American, whites, and Hispanics (Siegel-Hawley & Frankenberg, 2012). As of 2011, according to the US Census Bureau, in the state of Texas the number of white persons not Hispanic comprise 45.3% of the population, Hispanic or Latino comprise 37.6%, and African American persons comprise 11.8%. According to Texas Education Agency (TEA), in 2012 student enrollment in the state of Texas was 50.8% Hispanic, 30.6% white, and 12.8% African American (TEA, 2012).

Many African Americans and Hispanics experience double isolation as a result of the attributes of race and poverty. African Americans and Hispanics go to school with far greater numbers of low-income students than white or Asian students. To further examine the situation, African Americans and Hispanics normally attend schools in low-achieving school districts with a small percentage of affluent white students (Siegel-Hawley & Frankenberg, 2012). Klofenstein (2003) and Tough (2006) found that African American and Hispanic children are three times more likely to grow-up in poverty than whites. TEA reported in a published status report for the school year 2012-2013 44.3% of Texas students were eligible for free meals, 6.9% of Texas students were eligible for reduced-price meals, and 9.1% of Texas students were considered to be other economically disadvantaged (Economically Disadvantaged Status Reports, Retrieved May 2, 2015, from ritter.tea.state.tx.us). By 2012, the number of students enrolled in Texas schools that were economically disadvantaged had climbed to 60.3% (TEA, 2012).

Cota-Robles and Gordon (1999) cite disadvantaged students with high achievement scores from urban settings have smaller academic gains than students with high achievement scores in more affluent, suburban areas. Thus, disadvantaged students simply do not have adequate resources to meet their educational needs. The economic consequences for an uneducated workforce will strain the economy of the U. S. in lost tax revenues, lower rates of consumer spending, reduced per capita savings and increased social costs. (President's Advisory Commission on Educational Excellence for Hispanic Americans, 2003, p. 3).

A college degree leads to financial security and success to an individual; therefore, as minority groups continue to grow, we must find greater achievement for their educational attainments by closing achievement gaps. Society, as a whole, will benefit from closing the achievement gaps as our present situation of producing fewer educated people will be detrimental to our country's continued triumphs (Institute for Higher Education Policy, 2012). Over a 40 year working lifetime, a typical person with a bachelor's degree can expect to earn 73% more than person without a college degree (Baum, Ma, & Payea, 2010). Additionally, 25 to 34 year olds with a bachelor's degree will earn 60% more than persons in the same age group with only a high school diploma. According to Moore, Bridgeland, and Dilulio (2010), in a study funded by The Bill and Melinda Gates Foundation, in the United States one should expect to see a continued college graduation rates to have a 16 to 23 million shortfall of college-educated adults in the workforce. Furthermore, a person that is "head of household" without a college degree is over eight times more likely to live below the poverty line (Moore et al., 2010).

Statement of the Problem

Many programs exist for closing the educational gap for economically disadvantaged students. One such program, Advancement Via Individual Determination Program (AVID), states that it has numerous successes at making a college degree attainable for economically disadvantaged students. Does the AVID program close the achievement gaps and increase college preparedness for students who are considered economically disadvantaged and at-risk?

For the purpose of this study, the focus will be a city in southeast Texas where white persons not Hispanic comprise 53.4%, Hispanic or Latino persons comprise 22.8%, and African American persons comprise 19.2% (US Census Bureau, 2011). The 5A high school in this region where the study will be conducted has a student population that is comprised of 49.6% white persons not Hispanic, 19.5% Hispanic or Latino, and 22.9% African American persons (TEA, 2012). The Texas county that encompasses the school and city were found to have 40.4% of white persons either were attending or graduated from college, 22.4% of Hispanic or Latino either were attending or graduated from college, and 19.8% of African American persons either were attending or graduated from college (U. S. Census Bureau, 2011). The five year study by the U. S. Census Bureau also reported in this Texas county that 10.6% were white persons not Hispanic, 19.4% Hispanic or Latino, and 22% African American persons with an average gross yearly family income below $20,000. Borman, Stringfield, and Ruchuba (2000) believe that by 2020 the total U. S. population is expected to be for every two white or non-Hispanics there will be one Hispanic. Knowing this, it is essential to correct educational

discrepancy with low-income and minorities mainly comprised of Hispanics and African American persons.

There is a clarity of truth when examining the historical works of Bloom, (1978) as he found educational trends and adding more funds does not close the achievement gaps. Bloom analyzed student learning and argued the need to change. Bloom (1968) stated the average teacher expects a third of their students to fail or barely pass. The rest of the students are split between adequately acquiring the course information or surpassing the teacher's expectations in acquiring the course information. These teacher expectations methodically devastate the students in the bottom third over time. Eventually the students become frustrated and even humiliated after being subjected year after year to the expectation of failure. Bloom (1968) further found that administrators focus on teachers that are considered to be "too easy" or "too hard" when it comes to student success. That is, if an acceptable amount of student success and failure are shown then the teacher will be left alone as he or she is considered to fall within acceptable norms. Administrators allow low performing students to continue to be low performing because that is the accepted balance; some must fail and some must succeed. Does Bloom's findings still hold true some 45 years later, or can we help correct our educational system with a program like AVID?

The AVID program was built to support students socially and academically who have the potential to succeed in college but come from low-income families. AVID seeks to close achievement gaps and increase college preparedness for students who are considered at-risk (Martinez & Kiopott, 2005). The AVID program began in 1980 by

Mary Catherine Swanson, head of the English department at San Diego's Clairemont High School in California. Swanson founded the program with the principles of holding students accountable to high standards and to provide academic and social support with the hopes the students will meet the challenge of attaining a college degree. The AVID program supports more than 700,000 students at over 4,900 campuses from elementary through higher education (AVID Center, 2013).

The data presented thus far have shown that African American persons are not the only concern but also Hispanic persons constitute a major portion of the population in the State of Texas. As an alternate view, Tough (2006) wanted to dispel the notion that at risk minorities should be our focus but we should focus on "correcting the academic disadvantages of poor people" (Tough, 2006, p. 3).

To further support Tough's stance, Hart and Risley (1995), child psychologists at University of Kanas), conducted a study involving middle-class, college educated (professionals) parents and low-income, non-college graduate parents. They discovered professional parents used with their children an average vocabulary of 1,100 words verses 525 average word vocabularies for low-income parents and children. Hart and Risley (1995) further cited 487 "utterances" that included one-word commands to a complete monologue per hour with professionals and their children and 178 utterances for low-income parents and their children. To further examine the situation, the professional parents used 500,000 encouragements to 80,000 discouragements whereas the low-income parents used 75,000 encouragements to 200,000 discouragements by the time their child was three years old (Hart & Risley, 1995). When it comes to low-income

families, with every word, more and more of an educational gap is created by the environment in which they live.

Purpose of the Study

The purpose of the study is to determine if significant differences exist between AVID students and non-AVID students, in grades 9-12 regarding whether they achieved math and English TAKS commended status, PSAT scores, frequency of AP exams taken, and AP exam scores. This study will also seek the perceptions of AVID educators on the effectiveness the AVID program. This study will evaluate the effectiveness of a secondary AVID program on students' college readiness.

Significance of the Study

This study's findings will provide information that will inform principals on how to prepare and incorporate an AVID program on a high school campus. School districts must stay financially responsible while trying to push the limits of meeting our future students' educational needs. This would expectedly heighten the awareness of the educational leaders to make sound fiscal decisions. To future researchers, this study can provide baseline information on the recent status of a well-established AVID program and the gains or failures of the program.

The significance of this research study is to closely examine the AVID program and its ability to bridge the educational achievement gaps. The AVID program was designed to provide a college going atmosphere that help to boost students that may not have a college-educated parent. As Moore (2010) stated, parents without college degrees are eight times more likely to live in poverty (Moore, 2010). Economically disadvantaged

parents can limit the educational attainment levels of their children. First-generation college bound students were found to have a significant disadvantage in intellectual and social aspects when compared to students whose parents have attained higher levels of education (Cota-Robles & Gordon, 1999, Cushman, 2007; Jacobson & Mokher, 2009; Noguera, 2012; Padgett, Johnson, & Pascarella, 2012).

Research Questions

The study will answer several questions as they relate to the AVID program and the overall effect on the enrolled AVID students at 5A high school.

Research question one:

Do statistically significant differences exist between AVID students and non-AVID students regarding whether they achieved math and English TAKS commended status?

Research question two:

Do statistically significant differences exist between AVID students and non-AVID students on PSAT scores?

Research question three:

Do statistically significant exist between AVID students and non-AVID students regarding the frequency of AP exams taken?

Research question four:

Do statistically significant differences exist between AVID students and non-AVID students with their scores on AP exams?

Research question five:

What are the beliefs of teachers, the AVID coordinator, and the principal regarding the effectiveness of the AVID program?

Definition of Terms

5A high school: The University Interscholastic League in 2013 defines a high school with 2090 or more student with grades 9-12 to be ranked as 5A.

Adequate Yearly Progress (AYP): for this research study only, high school reporting will be defined. No Child Left Behind requires a campus to report TAKS data in English Language Arts and mathematics and report one other indicator (attendance or graduation rate).

Advancement via Individual Determination (AVID): A "college preparatory program for students with academic potential who have not previously succeeded in college preparatory curriculum" (AVID Summer Institute Training Manual, 2013).

AVID Student: a student who regularly attends an AVID elective class, enrolled in one or more advanced academic class each semester, and maintains an AVID binder.

Advanced Placement (AP): a high school course designed to be highly rigorous and based upon the corresponding AP test where a student could receive college credit if he or she scores high enough on the AP test.

Achievement gap: refers to the disparity of educational measures between groups of students.

American College Test: (ACT): A standardized test that measures basic mathematics, science, and reading skills and generally one of two tests required by universities for perspective students.

College-Readiness: considered to be an amalgamation of skills, knowledge, and habits necessary to be successful at the university level.

Cornell Notes: A method of note taking developed at Cornell University in which students take notes in a wide right-hand margin and reserve the narrow, left-hand margin for questions that the notes answer (AVID Summer Institute Training Manual, 2013).

Economically Disadvantaged: see "other economically disadvantaged, eligible for free meals, and eligible for reduced-price meals.

Eligible For Free Meals: eligible for free meals under the National School Lunch and Child Nutrition Program ("TEA Application Dispatcher", 2015).

Eligible for Reduced-Price Meals: Eligible for reduced-price meals under the National School Lunch and Child Nutrition Program ("TEA Application Dispatcher", 2015).

First-generation students: refers to students who are college bound without a parent who has graduated or attended college.

Grade point average (GPA): a mathematical scale based on 4, 5, or 6 points. Students are awarded a scaled point based on the grade earned from high school course work. For instance, a student earning an "A" in Algebra I would receive a scale score of a 4 in a 4-point scale or a 5 in a 5-point scale.

Letter grades: a generally accepted equivalency scale where students are given a letter graded based on the numerically earned grade. For instance, a student earning an 85 would receive a "B" for the course.

Other Economically Disadvantaged: students from a family with an annual income at or below the official poverty line; students eligible for Temporary Assistance to Needy Families (TANF) or other public assistance; students that received a Pell Grant or comparable state program of need-based financial assistance; students eligible for programs assisted under Title II of the Job Training Partnership Act (JTPA); and students eligible for benefits under the Food Stamp Act of 1977 ("TEA Application Dispatcher", 2015).

Scholastic Aptitude Test (SAT): A standardized test that measures English, mathematics, Reading, and Science with an optional writing test and generally one of two tests required by universities for perspective students.

Socioeconomically Disadvantaged Student: students whose parents have not received a high school diploma or do qualify for free or reduced lunch program.

Limitations

This study cannot limit when teachers used AVID strategies in their regular classroom to help the non-AVID students with their learning. Furthermore, this study cannot limit the students that may have received AVID strategies from fellow classmates that may have helped them achieve. Furthermore, this study cannot limit various learning rates and information processing skills among all students.

This study cannot account for the variations of quality instruction from teacher to teacher. As Whitaker (2012) found, programs or the campus being considered good or bad is not what is most important. Whitaker stated that effective teachers in the classroom are what matter most to increasing the educational achievements of students (Whitaker, 2012). Thus, this study cannot determine whether one student received higher quality instruction as this determination is vast and difficult to quantify.

The researcher found that the campus did not adhere to AVID's suggested student parameters of GPA and Socioeconomic backgrounds. The campus decided to expose more students to the AVID program than the standard set by AVID. The campus selected outside of the GPA middle students of 2.5 out of a four-point scale and allowed non-economically disadvantaged students participation in the AVID elective class (teacher, personal communications, 2014).

While it is important to sample multiple campus or districts and evaluate the educational achievements of its AVID students, the researcher has narrowed the focus to this one campus as to limit the inconsistencies inherent with a multi-campus study.

Chapter 2

Literature Review

The purpose of the study is to determine if significant differences exist between AVID students and non-AVID students, in grades 9-12 regarding whether they achieved math and English TAKS commended status, PSAT scores, frequency of AP exams taken, and AP exam scores. This research study will also examine the beliefs of several AVID educators and their views of the AVID program's ability to close the achievement gap.

This chapter provides a review of literature covering: (a) NCLB and House Bill 5 (b) the impact of Advance Placement (AP) coursework in high school, along with available access for economically disadvantaged students; (c) a history and current state of the AVID program; (d) a review of First Generation College bound students and (e) a review of college preparation programs. Other research has also shown significant areas that help support or contributed to the failures of some AVID programs including: (a) impact of teacher professional development and student success; (b) the evolution of teacher leaders with provided professional development and teaching experience; and (c) the impact of administration with bridging the achievement gap within the AVID program.

No Child Left Behind

The No Child Left Behind (NCLB) of 2001 was signed into law by President George Bush but was partially a reauthorization of a previous law, the Elementary and Secondary Education Act (ESEA) of 1965. Previously, ESEA was formally reauthorized in 1994 with an addition of the Title I program that provided government aid to disadvantaged students. The Title I program dramatically increases funding for campuses

or even districts as a whole, if they qualified. With the increased funding also comes strict federal government control in the expected achievement increases within the receiving organization. NCLB was designed to increase student achievements with specific academic achievement measures in mind (US Department of Education, 2013).

Annual testing

NCLB required states to establish annual tests for students 3-8 grades, specifically in reading and mathematics (No Child Left Behind Act, 2001). Grades 10-12 only test once in reading and mathematics. These tests must also be based on "challenging" academic standards. Both the academic standards and the test designs are required by NCLB to be created by the states themselves without nationally conceived uniformity. Many of the states have adopted state standards for all core subjects and many elective courses along with annually testing them along the same requirements as specified by NCLB (No Child Left Behind Act, 2001).

Results reporting

NCLB requires the annually conducted test results to be reported publicly via "report cards" (No Child Left Behind Act, 2001). The reported information must be broken down into several areas as well as overall results by each school district and each specific school must also report its scores independently of the residing school district. Reported test results must be broken down into ethnicities, English language learners, students with disabilities, and economically disadvantaged. Additionally, reports must include percentage of students not tested, two-year trend in student achievement, graduation rates, and teacher qualifications. These reports were intended to help ensure

that tests would not be lumped together in order for schools and districts to hide achievement gaps (No Child Left Behind Act, 2001).

Adequate yearly progress

Under NCLB, states must specify statewide objectives in reaching a 100% proficiency level in reading and mathematics test scores for all groups of students (No Child Left Behind Act, 2001). States had until the 2005-2006 school year to establish their tests and thereafter had to show adequate yearly progress toward the goal of 100% mastery of the state mandated reading and mathematics tests. Schools and districts not meeting adequate yearly progress have corrective actions dictated by NCLB. Not meeting AYP for two years would require no action. Year three of not meeting AYP would result in students and parents being allowed to be a part of the school choice option where the student of a failing campus could attend another school of his or her choosing. Year four through six of not meeting AYP would result in continuing school choice option and implementation of supplemental education supports. More specifically, the supplemental education supports entail extended tutoring and other outside school services, requiring 20% of the receiving Title I funds be spent on these services. Year seven of not meeting AYP would result a restructuring of the school with administration to teachers and revamping of the curriculum (No Child Left Behind Act, 2001).

Independent benchmark

In order to achieve some uniformity between states, the National Assessment of Educational Progress (NAEP) was established. NAEP samples each state's 4th and 8th graders scores and standards in reading and mathematics and evaluates them for

sufficient academic criteria. However, there were no established penalties for low academic standards and test criteria (National Assessment of Educational Progress, 2013).

Highly qualified teachers

By the 2005-2006 school year, another requirement of NCLB was all teachers should be "highly qualified." A teacher who is certified and demonstrated proficiency in his or her subject matter taught in an educational environment shall be considered "highly qualified." Any teacher hired through Title I funds after the 2001-2002 school year must be "highly qualified." Usual state requirements for "highly qualified" are at least two successful years of college with an associate's degree or higher and passed an established evaluation of content knowledge and teaching ability devised by the residing state (US Department of Education, 2013).

Executive order allowing NCLB waivers

In 2011, President Obama signed an executive order allowing states to request a non-participation waiver from NCLB. The caveat was that the opt-out state must adopted higher standards to allow some flexibility under Elementary and Secondary Education Act (ESEA). Education Secretary, Arne Duncan stated in an interview the prevailing ideas behind this move was that NCLB requirements are not teaching students how to be critical thinkers (Johnson, 2011). As of 2013, two states, Iowa and California, had their NCLB waiver rejected and only Illinois' status is considered pending. Three states had withdrawn the NCLB waiver; North Dakota, Wyoming, and Vermont. Two other states, Montana and Nebraska, have not completed the NCLB waiver application. The other 42

states and the District of Columbia have applied and received the one or two year NCLB waiver.

Another issue that has come under fire is the strict focus mainly on the reading and mathematics aspects of NCLB. The law established that testing should be cumulative and comprehensive as to not just focus on a particular grade level (Chubb & Ravitch, 2009). As a way to combat NCLB, House Bill 5 (HB5) was passed in 2013 by the Texas state legislature and was approved by TEA in January of 2014.

House Bill 5

HB5 was initially developed to limit the amount of end-of-course testing and massive cuts to public education funding by the state. More specifically, HB5 reduced the 15 end-of-course exams to 5. The 5 tested areas are Algebra I, Biology, United States History, English I, and English II. HB5 has also changed the state testing reported marks for students from Did Not Meet Standard to Level I: Unsatisfactory Academic Performance; Met Standard to Level II: Satisfactory Academic Performance; and commended Performance to Level III: Advanced Academic Performance (Texas Education Agency, 2014).

HB5 replaces the Recommended High School Program (RHSP), Minimum High School Program (MHSP), and Distinguished Achievement Program (DAP) with one 22-credit Foundation Program.

Foundation Program requirements:

- 4 credits in English language arts (English I, II, III, and an advanced ELA)
- 3 credits in math (Algebra I, geometry, and an advanced math credit)

- 3 credits in science (Biology, IPC or an advanced science credit, and another advanced science credit)
- 3 credits in social studies (U.S. History, .5 economics, .5 government, and either world history or world geography, or a new course combining world history and world geography)
- 2 credits in languages other than English
- 1 credit in fine arts
- 1 credit in P.E.
- 5 credits in electives (Texas Association of School Administrators, 2013)

In addition, HB5 requires districts to force all incoming ninth graders to select an "endorsement plan" with full disclosure in writing to parents. At the time of graduation, a student must complete an endorsement track and accumulate at least 26 credits. There are a total of five endorsements: Science Technology Engineering and Mathematics (STEM), Business and Industry, Public Services, Arts and Humanities, and Multidisciplinary Studies. HB5 requires a public school district to provide only one of the above endorsement tracks (Texas Education Agency, 2014).

Measures of College Readiness

There are multitudes of ways to gauge college readiness and for the purpose of this research the focus will be with advanced placement test scores, PSAT scores, and commended rankings on the TAKS mathematics and English tests.

History of advanced placement

The advanced placement idea was derived from two studies from the Ford Foundation after World War II. The studies recommended that secondary schools and colleges work together for advancement of motivated students to progress through their secondary and postsecondary education attainment without repetition of studies. Shortly thereafter, Andover, Exeter, and Lawrenceville prep schools and Harvard, Princeton, and Yale colleges revealed in a study the need for secondary schools to recruit imaginative teachers, allow high school senior students to enroll in college-level work, and derive a standardized test for measuring student achievement. College level curricula and standards were developed at the behest of the Committee on Admission with Advanced Standing. A pilot program of 11 advanced classes was launched in 1952, and by 1955 the College Board stepped in to administer the AP Program ("A Brief History of the Advanced Placement Program", 2015).

Economically disadvantaged students taking AP tests are lower than whites overall scores and number of AP tests taken. College Board reported in 2002, 13,680 schools nationwide offered at least one AP course with 844,741 students enrolled, and 1,414,387 AP exams given. College Board reported in 2012, 18,647 schools nationwide offered at least one AP course with 2,099,948 students enrolled and 3,698,407 AP exams given. College Board reported in 2002, for the state of Texas, 144,060 students enrolled in at least one AP course and by 2012 it had risen to 374,091 students enrolled in at least one AP course. College Board in 2002 reported less than 18% participation in AP exams by minorities and in 2012 had increased AP exam participation to 26%. College Board

reported for 2012 58.9% of economically disadvantaged AP exam takers were from underserved minorities, African Americans and Hispanics, and 23.9% where white. In the 2012, College Board reported 61.9% of white AP test takers scored a 3 or better, while 15.9% of Hispanic AP test takers scored a 3 or better, and 4.4% of African American AP test takers scored a 3 or better ("College Board Research and Development", 2014).

Students participating in AP courses as well as taking the corresponding AP exam outperformed and had on average higher college graduation rates than other college students with no AP experiences (Adelman, 2006; Challenge Success, 2013; King, 1996; Santoli, 2002; Warburton, Bugarin, & Nunez, 2001). In comparison, a study by Watt, Yanez, and Cossio (2003) found that grade performance had little bearing on student post-secondary success; however, enrollment in rigorous course work was the best way to increase the attainment of a college degree (Watt, Yanez, & Cossio, 2003). The AP program helps students show college preparedness and gain necessary skills to be successful in college but as Burton, Whitman, Yepes-Baraya, and Kim (2002) stated "roughly half of all high schools offer no AP courses" (p. 1).

Despite this argument of whether students have access to AP course work, the burden on the AP teacher is significant (Martinez & Kipott, 2005). Martinez and Kipott (2005) revealed that the success or failures of AP teachers with minority students depended on three elements: (a) length of teacher experience, (b) a college degree in AP course they taught, and (c) the frequent professional development in specific AP principles. Martinez and Kiopott (2005) realized a significant discrepancy between AP teachers' qualifications, preparation, and experiences in teaching AP courses. The study

drew a major link back to a lack of attended professional development directly aimed at teaching AP courses (Martinez & Kiopott, 2005).

Advanced placement (AP) exam scores

The AP exam measures a student's achievement in specific college level course work, for example Advanced Placement Chemistry or college level Chemistry. A student can receive a scale score of one (lowest) to five (highest). Typically, when a student scores a three, four or five, then the university the student attends after high school can award college credit for that particular course. The awarding of college credit based on the AP score does vary depending on the university. For example, Yale University requires an AP exam score of five in Biology, Calculus AB & BC, Chemistry, and English Language and Composition for college credit to be awarded. In contrast, University of Texas requires an AP exam score of four in Biology, Calculus AB & BC, Chemistry, and English Language and Composition for college credit to be awarded ("AP Credit Policy Search", 2015). In 2011, College Board reported the following from the AP test takers: 21.4% scored a one, 21.1% scored a two, 23.6% scored a three, 19.5% scored a four, and 14.4% scored a five.

AP course work

The College Board organization controls and approves courses wishing to be called Advanced Placement. The teacher selected by the campus or district to deliver instruction should be trained at a certified AP institution or designated trainer. College Board will reimburse the expense of the AP training for a teacher every three years. College Board must approve a course syllabus for each AP course offered at a public

school. College Board states the necessity of these requirements is to provide confidence for colleges and universities that the level of instruction is of college level (College Board, 2014).

Texas Assessment of Knowledge and Skills

Texas Assessment of Knowledge and Skills examination can:

- use multiple problem-solving strategies and logic to find reasonable solutions;
- transfer math knowledge between abstract and concrete applications;
- and use connections among math concepts to make generalizations and apply them to new situations (TEA, 2013).

Specifically, students earning a score of 2400 or better on the Texas Assessment of Knowledge and Skills mathematics examination are accredited with a label of "Commended Performance." Furthermore, students earning a score of 2400 or better with a 2 or higher on the essay on the Texas Assessment of Knowledge and Skills English Language Arts examination are accredited with label of "Commended Performance."

Students who earn a "Commended Performance" in English on the Texas Assessment of Knowledge and Skills examination are considered:

- able to draw insightful conclusions and make meaningful generalizations to develop a thorough understanding of a test;
- able to analyze ideas across texts most of the time;
- develop ideas in depth and use organizational strategies that contribute to the effectiveness of a piece of writing;

- and produce writing that is engaging and authentic (Texas Education Agency, 2013).

Preliminary Scholastic Aptitude Test (PSAT)

The PSAT measures critical reading skills, problem solving in math, and writing skills and allows for the "practice" option before a student takes one of the standard college entrance exams, the Scholastic Aptitude Test (SAT). The SAT is also known as the National Merit Scholarship Qualifying Test (NMSQT), which allows the consideration into the National Merit award and scholarship. The PSAT measures critical reading, mathematics problem solving and writing skills. A raw PSAT score is first computed with a quarter point deducted for an incorrect answer, no deduction for an unanswered question, and 1 point awarded for a correct answer. The PSAT scores are reported in each of the tested areas and also added together for a composite score. The PSAT scores were chosen for this study due to the 5A high school paying for and testing all attending eleventh graders.

American College Test (ACT)

The ACT exam is based on practical knowledge rather than cognitive reasoning and is used by many universities as an admissions and placement test. The scoring range for the ACT ranges from 1 to 36 and over 8 million students took the exam from 2011 to 2013. In 2012, the national average ACT composite score by race were as follows: African American 17.0, American Indian 18.4, white 22.4, Hispanic 18.9, Asian 23.6, Pacific Islander 19.8, and Two or More Races 21.4 (US Department of Education, 2013).

Grade Point Averages (GPA)

The southeast Texas high school uses both non-weighted and weighted grades when determining GPA. A weighted GPA is determined on a 5-point scale when a student attempts an advanced measure course, for example a pre-AP world geography class. A student not taking any advanced course work will have a GPA based on a 4-point scale. As shown in Table 2.1, a student earning an "A" in an on-level class will have a 4 factored in on the 4-point scale while a student earning an "A" in an advanced measure class will have a 5 factored in on the 5-point scale. For the purpose of this study only the 5-point scale will be used since the study populations only deal with students taking advanced measure courses ("High School Planning Guide", 2014).

Table 2.1

4- and 5-Point GPA Scale

Numeric Grade	4-Point Scale	5-Point Scale
90 – 100	4 Points	5 points
80 - 89	3 points	4 points
75 – 79	2 points	3 points
70 – 74	1 point	1 point

0 - 69	0 point	0 point

Economically Disadvantaged Students

The President's Advisory Commission on Educational Excellence for Hispanic Americans (2003) warned that an uneducated work force would hamper the nation's economic stability due to "lost tax revenues, lower rates of consumer spending, reduced per capita savings and increased social costs." Economically disadvantaged students, even students with high achievement scores, tended to have smaller educational gains than students who attended more affluent, suburban schools. This is mainly attributed to a lack of educational adequate resources in high economically disadvantaged schools (Cota-Robles et al., 1999).

Economically disadvantaged parents, in part, further confound the educational attainment levels of their children. First Generation College bound students were found to have a significant disadvantage in intellectual and social aspects when compared to students whose parents have attained higher levels of education (Cota-Robles et al., 1999, Cushman, 2007; Jacobson & Mokher, 2009; Noguera, 2012; Padgett et al., 2012). The overall findings of Padgett et al. (2012) support that college-educated parents pass down skills, attitudes, and interests to their children. Borman et al., (2000) found that ethnicity had nothing to do with student success or lack of success but was tied to the educational level of the child's parents. High achieving minority parents held their children to the same elevated academic expectations as highly educated non-minority parents (Borman et al., 2000).

The US Department of Education (2012) reported the following: 44% of white families had at least one parent who had achieved a bachelor's degree or better, 20% of African American families had at least one parent who had achieved a bachelor's degree or better, and 16% of Latino families had at least one parent who had achieved a bachelor's degree or better. Gandara and Maxweel-Jolly (1999) state that it is impossible to integrate society completely, especially at the leadership level until a higher percentage of minority groups attaining advanced degrees is reached. Moreover, without more minorities achieving college degrees, the nation's economic progress will not be able to fully reach its potential (Gandara et al., 1999).

Another segment of the economically disadvantaged parents' background can be tied to a lack of a robust vocabulary, and their children are at greater risk of not being prepared for AP course work or college ready. A ten-year study conducted by Hart and Risley (1995), child psychologists at University of Kanas, showed significant differences between economically disadvantaged families who received welfare assistance and non-economically disadvantaged families where at least one parent had attained a college degree. Table 2.2 shows the wide divide in developing communication skills and how that can at a very early age affect children (Hart & Risley, 1995).

Table 2.2

Economically Disadvantaged versus Non-Economically Disadvantaged Families and Language Acquisition

	Economically Disadvantaged	Non-Economically Disadvantaged

Parent's Vocabularies	525	1,100
Average Child's IQ	79	117
Number of Utterances by Parents	178	487
Encouragements from Parents	75,000	500,000
Discouragements from Parents	200,000	80,000

Economically disadvantaged students and advanced placement

The lack of AP courses offered at schools composed of high numbers of economically disadvantaged students limit preparedness for college (Adelman, 1999; Leonard, Blasik, Dilgen, & Till, 2003; Klofenstein, 2003) Adelman et al., 1999 contends that data showed economically disadvantaged students are enrolled less in AP courses and Latinos and African Americans and are three times more likely to be low income as compared to whites. Jacobson and Mokher (2009), for example, found that low-performing students who went on to postsecondary schools were highly likely to dropout within the first year. The success rate of low-performance students was 19% in achieving a college degree.

Economically disadvantaged students experience dual separation by the attributes of race and poverty. African Americans and Latinos go to school with far greater numbers of low-income students than white or Asian students. To further examine the situation, African Americans and Hispanics normally attend schools in low-achieving school districts with a small percentage of white students (Siegel-Hawley & Frankenberg, 2012). In contrast, the largest grouping of white, middle and upper classes, were located

in suburban type locations near major metropolitans. The low-achieving, rural areas have the distinct problem of not offering advance course work like Advance Placement (AP) and urban settings lack the diversified faculty, as the majority of teachers were white females. To further exacerbate the situation, the additions of AP course work at the inner city were largely unsuccessful (Challenge Success, 2013).

When AP courses were implemented with schools of high economically disadvantaged students, little attention was given to the students' preparation for the rigorous work. Accordingly, the Challenge Success study found high failure rates for the attempted AP courses and low scores on the AP tests. However, not all minorities are economically disadvantaged and have deficiencies as Gandara and Maxwell-Jolly (1999) discovered. Out of the middle class, students of color with a college educated parent had been best prepared in both academically and psychologically for the rigors and competitiveness of college. To further confound the situation of ethnic separation in public schools, the majority of white middle class parents stated they would prefer a more diverse school but still chose to live in predominantly white areas (Roda & Wells, 2013).

Borman et al., (2000) study noticed that "all" students from high-poverty schools disengage from their education at faster rates than students from low-poverty schools. Furthermore, African American students at or above the fiftieth national percentile in math and reading disengaged from learning at faster rates than whites in the same scoring range (Borman et al., 2000). Additionally, Borman et al. (2000) noted Latinos were significantly underrepresented at and above the seventieth national percentile in math and reading.

In Stillman's (2013) article, "The Elephant in the Classroom", she states a passive communication style from teacher to the economically disadvantages students is confusing for both teacher and student and can lead to learning obstacles. She argues that teachers can become upset because they feel they are providing respect to the economically disadvantaged students by asking for compliance. In contrast, the economically disadvantaged students expect authority figures should tell them what to do and see passive style as a sign of weakness. Stillman (2013) further explained that the teachers who take the authoritative approach to teaching with economically disadvantaged students would take the teacher-centered or lecture driven approach which does not always lead to the best learning environments.

Nevertheless, there are gaps in economically disadvantaged students (Noguera, 2012). Noguera (2012) revealed several "gaps" in the various aspects of a child's educational experiences. First, the "preparation gap" was noted as widely varying curriculums from district to district and even from school to school within the same district. Second, a part of the preparation gap can be partially blamed on the "allocation gap"; where school funding sources are also widely varied from one school setting to another. The final gap was the "parent gap" where more affluent parents could provide their children more opportunities than poorer, less-educated parents (Noguera, 2012). Tough (2006) believes that some people have focused on the wrong issue and "wondered whether focusing on race was in fact a useful approach. Why not just concentrate on correcting the academic disadvantages of poor people?" (p. 3).

On average, non-economically disadvantaged students receive higher pay after becoming an adult than economically disadvantaged students. Jacobson et al. (2009) discovered the earning of students six years after high school that qualified for free and reduced priced lunch (FRL) to be 10% lower than those of non-free and reduced priced lunch (NFRL) students. As shown in Table 2.3, the gap is apparent when evaluating the differences between FRL and NFRL. The largest discrepancy between FRL and NFRL is the attainment of a college degree or credential.

Table 2.3

Non-free and Reduced Priced Lunch Students (NFRL) verses Free and Reduced Priced Lunch Students (FRL)

	NFRL	FRL
Attended College within 2 Years	39%	25%
Completed a Year's Worth of College	30%	17%
Attained a College Credential within 6 Years	20%	9%

Attained a Health or Professional Credential	8%	3%

The National Center for Educational Statistics (NCES) reported in 2004, 40% of first-time freshmen entering a four-year university and 60% of first-time freshman entering a two-year college enrolled in at least one remedial course. Furthermore, the students were then divided into socioeconomic quintiles and NCES found 63% of the students in the lowest quintile required remediation upon entry to a university. In contrast, 24% of the students in the highest quintile were required to take a remediation course (National Center for Educational Statistics, 2004).

First Generation College Students

While most First Generation College bound students may be considered economically disadvantaged there is specific research that directly looks at whether or not a student's parents attended college or attained a college degree and the student's college degree attainment. As Stebleton and Soria (2012) found First Generation College students have a multitude of conflicts that can hamper their learning outcomes. They cited, First Generation College students struggle with maintaining a job, family obligations, weak English and mathematic skills, and difficulty with poor study habits. Furthermore, Stebleton et al. (2012) revealed First Generation College students are more likely to experience feeling of depression and stress than non-First Generation College students (Stebleton & Soria, 2012).

In contrast, Blackwell and Pinder (2014) cited most third generation college students do not decide whether they will attend college, but their family made the

decision early on in their childhood. The expectation to attend college was instilled in third generation college students and was made to believe college was not an option, but an inevitable outcome (Blackwell and Pinder, 2014).

Many possible solutions theoretically exist for First Generation College students that can build supporting structures around them to facilitate a college going atmosphere. Support groups whether it is teachers or peers that can help with providing advising, tutoring, and mentoring will create a college going atmosphere (Lightweis, 2014, Blackwell, 2014, Stebleton et al., 2012, Dansby and Dansby-Giles, 2011, and McMurray and Sorrells, 2009). Furthermore, as Dansby et al., (2011) stated, "Relationships that students develop with the sponsors of extracurricular activities provide bridges to help students navigate impasses with other teachers through advocacy", (Dansby et al., 2011, p. 15).

Moreover, Blackwell et al., (2014) sighted First Generation College students "need to see college graduates that look like themselves" (p. 55). Similarly, McMurray and Sorrells (2009) addressed five strategies for improving the learning outcomes and ultimate achievement of a college degree, one of which being "illustrative examples" (p. 211) of other First Generation College students that were successful in attaining a college degree (McMurray and Sorrells, 2009). The other four strategies from McMurray et al., (2009) included campus personnel should be fully aware of not just what the demographics that comprise the school but specific backgrounds within each subpopulation. Another strategy incorporated the idea of "redemptive opportunities" (p. 212), which allowed for First Generation College students to try and have an allowance

for mistakes. Along with this strategy, “many first-generation students may find it easier to not try rather than to risk additional failures if they perceive that there is not a chance to recoup after an early poor performance,” (McMurray et al., 2009, p. 212). The last two strategies revolve back around the idea stated earlier, of a since of communal camaraderie with specific influences of injected humor and laughter (McMurray et al., 2009).

Other College Preparation Programs

There are many types of college readiness programs that focus on academic rigor and student achievement as well as students’ behaviors and preparation for college attainment (Bailey and Karp, 2003; Thruston, 2009; Kleiman 2001). Research completed by Perna (2002) found roughly 1,100 college outreach programs by colleges and at least a third of these programs were specifically geared towards economically disadvantaged youths.

Secondary and higher education partnerships

One particular partnership between Worthington Charter School and Garrett College of Baltimore City, Maryland worked with sixth, seventh, and eighth graders and their college outlook (Rinke, Arsenie, & Bell, 2012). The charter school and college instituted a career institute that lasted for one week as an after school program and allowed the middle school students to explore future “life paths.” Following the week long program, middle school students visited Garrett College to further their knowledge of college admissions, college curriculums, and extra-curricular options. Organized small groups made-up of Worthington and Garrett College students fostered a strong mentorship where middle school students where guided in life decisions and the logistics

of college. The middle school students, when polled, had a better understanding of how to reach and pay for college and the value of a college degree for their future careers (Rinke, Arsenie, & Bell, 2012).

Another program, Paterson Teachers for Tomorrow (PT4T) partnership between the city of Paterson, New Jersey and William Paterson University was established in 2000 for the purpose of encouraging Paterson's high school students to become future teachers and have them return to teach in the multicultural Paterson Public School system. The partnership focused on raising college awareness with emphasizes in rigorous coursework, capacity for risk-taking, and caring environment. The college preparation program was deemed successful but realized three key factors for continued accomplishments. First, it takes a large amount of human and physical resources. Second, learning must take place through meaningful activities that allowed the students to understand the programs importance. Third, the program must not only focus on academics but also on the social aspects, more specifically student positive "attitudes." Students involved in the program reportedly gained academic skills like how to communicate in front of others and most importantly, problem solving skills (Hill & Newton, 2005).

Higher education outreach programs

Upward Bound is a program offered by the federal government to help with preparing economically disadvantaged and First Generation College students for college. Mainly higher institutions of education participate in the federal program along with a few state education agencies and secondary schools. President Lyndon B. Johnson

established upward bound when he signed the Higher Education Act of 1965 ("Upward Bound Program", 2015). Currently, Upward Bound targets students between grades nine and twelve whose family income is 150% below the poverty line and lack home and community resources. During an intensive six-week summer program at a participating college campus, eligible secondary students are exposed to academic counseling; tutorial services, particularly in math, science, foreign language, English, and composition; information about Federal Student Financial Aid programs and benefits; and cultural and career explorations (www.ed.gov, 2013).

Private schools

Cabrera, Prabhu, Deil-Amen, Terenzini, Lee, and Franklin (2003) found the traditional approaches to promoting reading and math for economically disadvantaged students and the college entry push to be more effective by using a comprehensive and coordinated intervention program. High school students and their families have shown to benefit from long-term support by promoting college aspirations through rigorous course work and social supports (Dyce, Albold, & Long, 2013). On the contrary, McAllister and Mevs (2012) argue that given only 30% of the college bound attain a college degree then the goal for all students to go to college may be incorrect.

Outside of the college preparation programs, Sheely-Moore and Bratton (2010) developed four general strategies for promoting working relationships with economically disadvantaged families: (a) use direct contact with parents, for instance when the parent(s) are dropping off or picking up their child; (b) stay flexible when scheduling meetings as many economically disadvantaged parents work extra hours or non-nine to

five work schedules; (c) provide ancillary services, for instance provide small children baby sitting or meals during parent meetings; (d) help establish a meal program via community and business members as many economically disadvantaged families may not have the resources to provide evening meals consistently. In other words, college preparation programs were not the only way to address the educational issues surrounding economically disadvantaged families.

The Advancement Via Individual Determination Program (AVID)

AVID was found to raise student expectations and overall student postsecondary education and could even help an entire campus (Guthrie and Guthrie, 2002). Even non-AVID students were driven to try advanced classes as more AP classes were offered due to the increase of AVID students having to take at least one advanced measure course. Martinez and Klopott (2005) found four reform practices "have successfully improved student achievement and increased enrollment in postsecondary education" (p. 36). First, students need access to a rigorous academic curriculum. Second, a personalized learning environment should be apart of the basic school structure. Third, social structures with an emphasis on building relationship should be a focus. Last, the curriculum should be aligned between K-12 systems and postsecondary (Martinez et al., 2005).

AVID history and essential elements

AVID was created by Mary Catherine Swanson in 1980 at San Diego's Clairemont High School. While working as the head of the English department at Clairemont, she wondered how to educate newly federal court ordered students to attend

from the inner city at the academically acclaimed Clairemont High School (A Brief History of the Advanced Placement Program , 2013).

With the approval of administration, Swanson founded an elective class that concentrated on holding underserved students to the elevated Clairemont standards with academic and social supports that provided survival skills. These academic and social supports developed over time into eleven essential standards (AVID, 2013).

The selection of students for the AVID program focuses on students in the middle grade point average (GPA) range of 2.0 to 3.5 along with viable academic potential and the student's interest in college preparation. The AVID institute states that student selected below a 2.0 GPA will find the program's demands to be too cumbersome and eventually quit or have to be removed from the AVID program. Also, students selected above the 3.5 GPA will find the extra "work" required of the AVID program to be unnecessary and eventually dropout of the AVID program.

The AVID Institute denotes 11 "essential elements" that can benefit an AVID program:

1. Student Selection: students in the middle with academic potential
2. Voluntary Participation: students and staff who choose to participate
3. Full Implementation: commitment by participants to fully implement all components
4. Academic Rigor: implementation of a rigorous course of study in AVID classes
5. Strong, Relevant writing and Reading Program: rigorous writing and reading activities as a basis for instruction

6. Inquiry as a Basis for Instruction: inquiry as a basis for instruction leading to critical thinking
7. Collaboration as a Basis for Instruction: collaboration among all AVID stakeholders as a basis for instruction
8. Tutorials led by AVID-Trained Tutors: AVID-trained tutors leading Socratic-method tutorials
9. Use of AVID Center Data System: analysis of all sorts of data to foster data-driven instruction
10. Available Site/District Resources: funding, curricular, and professional development support
11. Active, Interdisciplinary Site Team: collaboration to achieve student access in rigorous courses (AVID's Mission, n.d.)

In a report by Guthrie et al., (2002) there are three other suggested essentials for a successful AVID Program:

1. It is recommended for the participating school or district to actively recruit math teachers into becoming an AVID elective teacher.
2. It is recommended for the AVID elective teachers be provided and actively participate in district led high quality professional development and attended the AVID Summer Institute each year.
3. It is recommended for the AVID school and district site coordinator to be dedicated, experienced, and highly respected teacher with advanced knowledge of

curriculum, college admissions, public relations, and other specialized areas (Guthrie et al., 2002).

The AVID program is currently found in more than 4,900 K-12 schools and 28 post-secondary schools and span 46 states and 16 foreign countries, thereby supporting over 700,000 students (A Brief History of the Advanced Placement Program, 2013). As of 2013, the AVID institute stated success rates were 98% of AVID seniors will graduated from high school with 90% planning to attend a postsecondary institution, 58% of the seniors reported they will attend a four-year college, and 32% will attended a two-year college. Of the participating AVID students, 73% were found to take at least one AP course and 61% taking the corresponding AP exam. AVID also reported a better than national average of Latinos and African Americans taking AP exams at 57% AVID Latino students verses 14% national average of Latinos and 14% AVID African American students verses 8% national average of African Americans. The AVID institute considers the AP exam and corresponding AP course work to be a quality gauge for the eventual success of the college bound AVID student (A Brief History of the Advanced Placement Program, 2013). Because AVID proactively seeks to raise achievement and increase college preparedness for students at risk, it deliberately addresses the predictors of college-going behaviors and uses college entrance and completion as measures of its success, making it unique among the reform models examined in this study. AVID achieves its goals by providing student with tremendous amounts of social and academic support. It seeks to create a network of caring and informed adults around each student,

establishes high expectations for students, and provides a means by which they can meet these expectations (Martinez & Kiopott, 2005, p. 18).

Does AVID work?

Research has shown that in some cases AVID does make a difference in the postsecondary educational attainment. A study conducted by Watt, Powell, Mendiola, and Cossie (2006) found improvements in high school graduation rates, AP enrollments, and AP testing where an AVID program was fully implemented. Additionally, the AVID site team and, more specifically, the lead teacher who were committed to proper student selection, supporting curriculum geared towards college attainment, tutoring, teacher professional development, fundraising and parental involvement were a few of the vital aspects of AVID programs (Watt, Powell, Mondiola, & Cossie, 2006). Huerta, Watt, and Butcher (2013) reaffirmed in a research article that AVID students were more prepared for the rigors of college. They elaborated that a school needs to offer rigorous, advanced courses that help students think critically. Limited budgets and lack of support from the district level will hamper AVID's programing options (Huerta, Watt, & Buthcer, 2013).

Furthermore, several other AVID programs were examined by Watt, Johnston, Huerta, Mendiola, and Alkan (2008) and two issues were discovered: (a) students who did not feel nurtured dropped out of AVID, and (b) senior AVID students ended up dropping the AVID elective course due to either scheduling problems caused by the school or district, lack of room in the student schedule, or graduation requirements. At the same time, the students that continued all four years in the AVID program reported the primary reason for staying in the program through their senior year was for the

benefits of a family atmosphere, which added to their academic and social supports. Consequently, Guthrie et al. (2002) discovered that three-fourths of former AVID students currently enrolled in college kept in touch with current AVID high school students and nearly half maintained contact with their former AVID teacher.

In an investigation of an AVID program with African American students in North Carolina by Parker, Eliot, and Tart (2013), they found several profound attributes due to an AVID program at the high school level. First, African American students felt a close relationship and support with the AVID teacher and fellow students in the AVID class. Second, through these close relationships with their AVID peers they developed new friendships built around academic accomplishments. Last, the African American students developed new outlooks on life that helped them see ways to improve their future through educational attainments (Parker, Eliot, & Tart, 2013).

In a study on an AVID program with economically disadvantaged students, Bernhardt (2013) found the AVID curriculum exposes students to elements they cannot normally find at home. First, Bernhardt found students could develop strong language skills necessary to navigate higher educational institutions. Second, he found the students were taught self-advocacy and encouraged to take responsibility for their learning. Last, Bernhardt established that economically disadvantaged student in an AVID program developed strategies to collaborate with their AVID peers and the AVID teacher (Bernhardt, 2013).

Two of the AVID essentials, student freedom of choice and fully committed implementation of the school and district, were found to be the most beneficial to

continued successes of the AVID program (Swanson, 2000). Without student choice and student commitment to the AVID program, Swanson (2000) discovered failure of the student and/or the program to follow. Furthermore, if the school or district did not fully support the AVID program with resources then the program would falter.

Simply stated, the AVID program has grown due to both the empowerment of the students in academic initiatives and the social elements. Through rigorous course work and socialization aspects of the elective AVID class, the students are better prepared for postsecondary achievement (Swanson, 2000). The AVID "family" was also coined as being a benefit to economically disadvantaged students and has even expanded to include many of the students' parents. A promising option reported by MacIver (2011) was to increased student performance was the assignment of adult advocates and support of building quality educationally driven relationships between student and teacher. Martinez et al. (2005) accepted that AVID "reflects the belief that if students are given strong academic and social support, they can complete higher-level course work" (p. 17).

From the historical perspective of Bloom (1968), the idea of small group learning is not a new idea. Bloom found that the ideal tutor should be someone other than the student's teacher as the tutor can bring a "fresh way" of expressing the curriculum. Bloom also found that students at the secondary or higher education level do not frequently seek tutoring help. Therefore, AVID's approach to require tutoring during the school day with AVID tutors is a strong approach to increasing preparing students for college.

The AVID mission is to prepare students for college but the elective AVID teacher must also be prepared to teach and implement the AVID curriculum (Watt, Huerta, & Mills, 2009).

Teacher Professional Development and Student Success

> No single principle of school reform is more valid or durable than the maxim that "student learning depends first, last, and always on the quality of the teachers." Experts may disagree about how highly to value the size of a class or school, how the system functions, or whether it is adequately funded—but nobody's list of education's priorities fails to place teacher quality at or very near the top. (Institute for Educational Leadership, 2001, p. 1)

Providing substantive of quality and teacher driven professional development must support increasing teacher effectiveness with the final goal of furthering student achievements (Burton, Whitman, Yepes-Baraya, & Kim, 2002; Institute for Higher Education Policy, 2012; President's Advisory Commission on Educational Excellence for Hispanic Americans, 2003). Without continued professional development of teachers, student learning will not increase. The vast majority of schools have assigned in-service or professional development as a low priority (Institute for Educational Leadership, 2001). The Institute for Educational Leadership (2001) went on to say in their brief there seemed to be no other professional career fields that spends less time and money on increasing the knowledge base and experience of its employees.

Good teachers have considerable influence on student educational attainments. The Policy Studies Associates (PSA) stated good teachers that generate high student performances are experts in their content knowledge, experienced teachers, spend time training, and have high cognitive skills. Furthermore, PSA (2005) found the distribution of good teachers to be subpar at low-performing schools than high-performing schools.

Not all teachers, good or bad, are the same. In a research study by Kornelis (2014), he found that teachers could be categorized by stages throughout their educational career. The anticipatory stage is the inception area of a person new to the teaching profession. These newcomers to being a teacher are generally eager and enthusiastic but needs frequent supervision. After a few years of teaching, the teacher will flow into the professional stage. This is where the teacher's confidence builds and continues to the expert stage. Following the professional stage, a teacher can achieve the distinguished level of where they are helping make educational decisions at levels beyond their campus.

Kornelis (2014) further found that teachers could at any time move into a stage of renewal or withdrawal. The renewal stage is where the teacher has support to refine and take risks with advancing their skill set. The withdrawal stage exists when supervisors are not encouraging and the teacher takes on a detached or even cynical mindset. Kornelis (2014) found that if this stage continues for too long then the teacher will end up leaving the profession or be a detriment to the students in the classroom.

To further elaborate, Riggs (2013) wrote an article based on interviews of teachers about their reasons for leaving the teaching profession. She found some of the

main reasons for teacher turnover was overwhelming amounts of after-hours work even though they had the summer free, the amount of emotional energy required to teach exhausted them quickly, low pay, and lack of respect. The teachers on low-performing campuses felt they could never win when it came to improving the educational attainment of their students (Riggs, 2013). Furthermore, The National Commission on Teaching America's Future (NCTAF) in 2004 established top reasons for teachers leaving the profession similar to what Riggs findings suggest (The National Commission on Teaching America's Future, 2004).

The NCTAF went a step further and established some variations for teachers leaving the profession based upon low- or high-performing campuses. High-performing campus, for the most part, have low turnover based upon data-driven decision making, shared leadership, and high parental involvement. In contrast, low-performing campuses lose teachers due to parental disengagement, top-down leadership approach, bureaucratic overload, and teacher isolation (Carroll & Fulton, 2004).

High-performing schools take on a collegial and cutting-edge stance to improving the quality of education for students. Additionally, the administrators work to clarify goals and expectations with the faculty and staff along with holding a supportive stance to risk-taking. Ultimately, the staff development must be strong and support the collaborative views of the stakeholders (Sparks & Loucks-Horsley, 1989; Beavers, 2009).

Chapman (2005) suggested 11 practical ways to expand teacher's abilities thereby increasing student educational successes:

- The teacher should know their course standards that are tied to strategies and activities.
- The teacher should use a variety of instructional strategies and activities.
- The teacher should create a climate of learning.
- The teacher should be shown examples of other teachers that are considered to have "withitness." Chapman defined withitness as being able to show they care about each and every student and makes each student feel they are a valuable member of the class.
- The teacher should be provided a variety of recourses but also taught how to find resources themselves.
- The teacher should focus on getting to know their students as individuals
- The teacher should be taught how to assess students before, during and after learning has occurred.
- The teacher should be taught how to adjust assignments based on the students' needs, knowledge base, and interests.
- The teacher should focus on student-focused opportunities
- The teacher should allow for flexible groups of students during various activities.
- The teachers and administration must understand that change is gradual (Chapman, 2005)

New teachers from the Y Generation are continuously entering public education, and it is the administrators' job to build or maintain humane, high-performing campuses that will improve the learning of all students (Coggshall, Behrstock, & Sherratt, 2011).

Generation Y were born between 1977 and 1994 and view education as behind the times. If administrators can harness and build Generation Y as public educators then the hope for future public education is bright. Predominantly, Generation Y what to change to world for the better but do not want to waste their time (Behrstock, 2009).

Hewlett, Sherbin and Sumber (2009) found somewhat varying viewpoints when it comes to Generation Y and the dominant group in education, Baby Boomers. Generation Y's consider the following to be just as important as compensation when polled: surrounded by high-quality colleagues, flexible arrangements, advancement opportunities, recognition, and access to new challenges. In contrast, Baby Boomers expect high quality colleagues, a stimulating environment, classroom independence, flexible arrangements, access to new challenges, the means to give back, and recognition (Hewlett, Sherbin, & Sumber, 2009).

AVID curriculum and teacher training

One of the critical elements to any successful AVID program is the training an AVID elective teacher must undergo before and during the facilitation of AVID students (Watt, Huerta, and Mills et al., 2009). Martinez and Kiopott (2005) reported a properly trained AVID teacher focus the AVID elective class on note-taking, test-taking, study skills, time management, effective textbook reading, research skills, and college entrance exam preparation. Guthrie et al. (2002) agree with the AVID focus on time management as they concluded it to be the most difficult aspect of college life.

The AVID curriculum is based on rigorous standards developed in collaboration with secondary teachers and college professors. Its fundamentals are driven by what is

referred to as WICR strategies. Below is a list of Write, Inquiry, Collaboration, and Reading (WICR) strategies the AVID Institute (2013) strives for promotion in campus and district level AVID curriculums.

Writing encompasses almost anything that can be produced in printed form. Some examples are scientific writing, creative writing, prewriting, poetry, rhymes, definitions, vocabulary, equations, quick writing, question writing, and journaling. AVID states that writing is basic to thinking, learning, and growth thereby allowing students to think in complex ways, build critical thinking skills, and develop knowledge of oneself and the outside world within which he or she exists. AVID has also found that writing also helps clarify and order experiences, while simultaneously demonstrating how much a student knows about any given topic. The more fluent the writer, the more successfully one can compete academically (AVID Institute, 2013).

The basic writing strategies promoted in AVID include class and textbook notes, more specifically Cornell Notes; responsive writing; learning logs and journals; the writing process; prewriting; drafting; revising; editing; and final draft. Inquiry-based learning focuses on the student as they learn, developing skillful, open-ended questioning skills. Being able to recognize different levels of questions is beneficial for all students in many areas of learning. Students in AVID understand the three levels of questions designed by Art Costa, which is critical for student success. AVID inquiry strategies for success include: skilled questioning; Socratic seminars; quick writes/discussions; critical thinking activities; writing questions; and open mind activities. Collaboration includes any time a student interacts with another student and learning can be less threatening and

more inviting. Students will internalize what they have studied and learned if they are able to collaborate with others and make connections. Some Collaborative AVID strategies include group projects, student groups, jigsaw activities, cooperative learning strategies, Kagan strategies, read-arounds, responsive/edit/revision groups, peer editing, games, and group presentations. Reading is the key to understanding in all content areas. Maintaining reading as a focus in AVID develops reading comprehension, awareness of the different reasons for reading, and understanding of the different structures of texts. Readers read for three purposes: (a) information, (b) problem solving, (c) entertainment or recreation. Some AVID reading strategies include survey, question, recite, and review (SQ3R); what I know, what I want to learn, what I learned (KWL); reciprocal teaching; think-alouds; and literary circles (AVID Institute, 2013).

Many of the above listed AVID strategies have even made way into other classrooms outside of the AVID elective classroom have shown to improve the non-AVID students just by peer pressure to use the strategies and non-AVID teacher initiatives. The AVID Summer Institute were offered in multiple locations around the nation like Hawaii, Dallas, Orlando, Philadelphia, and San Diego and offered a wide range of what is referred to as "strands." Each summer institute offers over 40 strands and for the purpose of this research only high school strands will be listed (AVID Institute, 2013).

- Implementation High School
- Tutorology
- Advancing the AVID Elective High School

- Essential Academic Skills for College Readiness
- Writing Middle School and High School
- Leadership for Implementation High School
- Leadership for Advancing
- Leadership for AVID Schoolwide
- Counseling High School
- Preparing for College
- English Language Arts 1 & 2
- English Language Arts 2
- English Language Learners
- History/Social Science Through Literacy
- History/Social Science Through Historical Inquiry
- Mathematics 1 & 2
- Science 1 & 2
- Critical reading
- Culturally Relevant Teaching

The scope of the strands are broad and offer more than just professional development to the AVID elective teachers but also included administrators, counselors, curriculum experts and district leaders (personal communication, 2013). These strands train in various areas including teaching strategies, specific content areas, and how to maintain the AVID program. Each summer institute encompassed three days of intense

training. AVID believes in professional development for all members of a school and district.

AVID site team

The AVID program is based on a strong collaborative team of educational leaders called "The AVID Site Team." An AVID Coordinator, one selected by a campus level principal or a district administrator, leads the AVID Site Team. The coordinator, along with the site team, directly facilitates the implementation of AVID curriculum school wide, student placement in the program, and works with counselors to guide AVID students through the college application process (AVID Institute, 2013).

AVID elective class

Through the administration of the AVID elective class many of the teachers shift into teacher leaders. The AVID elective class must provide organizational tools "to promote thinking, learning, and time management" via binders, agendas, and calendars used to keep track of coursework and non-academic activities (AVID Institute Handbook, 2013, p. 32). The AVID elective class must provide a strong, relevant writing curriculum and an inquiry-based format for student knowledge attainment. Student collaboration is necessary for furthering the students' academic success but also promoting the social aspect of the AVID program.

The AVID staff must provide sufficient number of tutors. For the most part, tutors were prior AVID students themselves who understand the AVID process and are currently enrolled in college. The AVID staff must ensure a tutor has significant math skills, as this is the most reported area of need for AVID students (AVID Institute, 2013).

Teacher leaders

The vast offerings of professional development by the AVID Institute created significant gains in a teacher's leadership role within their campus after attending one of AVID's Summer Institute (Watt, Powell, Mendiola, & Cossie, 2006; Watt, Huerta, & Mills, 2009). Watt et al. (2009) also found in their study that a teacher normally stops becoming significant in their leadership role after serving six to nine years at the same school and also showed an interesting occurrence of females exhibiting greater levels of leadership than males in similar roles. Furthermore, the study found teachers with a master's degree exhibited significantly more leadership role than that of a teacher with only a bachelor's degree.

Huerta, Watt, and Alkan (2008) were unable in their study to ascertain whether a teacher was chosen for the AVID program by their principal because of their leadership qualities or the following potential that would allow them to grow into the leadership role necessary for a campus AVID teacher. Huerta et al. (2008) did find that the AVID leaders did significantly impact school culture, teacher behaviors, and curriculum alignments.

Administration and Bridging the Achievement Gap

Some educational administrators have impacted the educational attainment for economically disadvantaged children to help close the achievement gap. Noguera (2012) stated that it is necessary for support and clarity for closing the achievement gap or students will continue to be adversely affected. Furthermore, administrators must have a willingness to learn from other educators that have proven to be successful in closing achievement gaps. The Institute for Educational Leadership cautions administrators who

were trying to create educational change with a top-down and hierarchical in decision making approaches. Teachers were found to be necessary for not only creating the crucial changes but the teacher leaders helped foster the change to other faculty and staff. By utilizing this approach, group decision-making became infectious, changes spread more quickly, and implementation became more widespread in classrooms (Institute for Educational Leadership, 2001). Leading an educational diverse community is a challenging prospect for any appointed leader to adeptly marshal the educational stakeholders with a common vision (Stillman, 2013).

There are other areas that surpass the control of campus administrators that can affect the achievement gap. A study by Kythreotis and Pashiardis (2006) found the frequent movement of administration and teachers from one school to another negatively affect a school's climate. Furthermore, the process of either building or maintaining a positive school culture was directly tied to the leadership style of the principal (Kythreotis & Pashiardis 2006). However, administrators can directly affect achievement outcomes by the teacher assignments. Administrators who routinely gave teacher leaders more favorable teaching assignments directly moved more qualified teachers away from low-achieving and economically disadvantaged students. Less qualified teachers with the low-achieving students have been found to negatively affect the achievement attainment of students (Kalogrides, Loeb, & Beteille, 2011).

Creating a college going atmosphere

In a study by Martinez and Klopott (2003), several elements were found necessary for increasing the number of high school students to move on to a

postsecondary education. The expectation must first be set with faculty and then with students and parents, as the stakeholders must play a part in the child's achievements with supporting behaviors. The administration must also establish and maintain a rigorous core curriculum with clear avenues to various college degree paths. More specifically, rigorous math, reading and writing aspects would need to be built into all curriculums. The final element, Martinez and Klopott (2003) found was for college information and options be communicated clearly and often to students and parents (Martinez & Klopott, 2003).

In an earlier study, Gandara and Bial (2001) had similar findings of creating and maintaining a school climate set with the expectation of students will go to college. Gandara and Bial (2001) found the need for a strong and structured curriculum with the addition of required tutorials. The study realized short-term interventions did very little to affect student achievements but long-term investments in a college bound program was most beneficial (Gandara & Bial, 2001). Additionally, providing a key person, like a mentor, teacher, or counselor, to guide a student over the child's secondary education provided a stable base for postsecondary attendance. Adelman (2006) supports the mentor option and stated in a report that providing a mentor would help all students but can be most beneficial to Latinos and African Americans. Klofenstein (2003) concluded that Latinos and African Americans need increased mentoring of the potential benefits of strenuous high school course work for pathways to college to become available.

In a report by Conley (2010), he "proposed a fair standard to which high schools should be held accountable" (p. 1) for their efforts and successfulness of its graduates at

the postsecondary level (Conley, 2010). A conceptual model for college readiness was offered by Conley (2010): (a) key cognitive strategies be established in problem formulation, research, interpretation, communication, precision, and accuracy; (b) key content knowledge be established in writing, knowledge and skills in math, science, world languages, and the arts; (c) academic behaviors be instilled with self-management, self-awareness, self-monitoring, and self-control; (d) contextual skills and awareness be established in understanding how college operates as a system and a culture (Conley, 2010).

Novice and Low-Performing Teachers

The achievement gaps of economically disadvantaged and low-performing students can be directly linked back to the experience and attitudes of the teacher. One of the most debilitating factors affecting closing the achievement gap is the inexperienced or low-performing teacher (Kalogrides, Loeb, Beteille, and Urban Institute, 2011). The achievement gap is further compounded by the majority of inexperienced teachers are in rural or inner city schools, where predominately economically disadvantaged students attend (Spatig-Amerikaner, 2012). Kalogrides et al. (2011) found most school administrators selected the highly experienced teachers for the advanced classes and left the inexperienced teachers in other classes that have on average more economically disadvantaged students. Additionally, it was found that new teachers are quick to leave a campus that places them with predominately economically disadvantaged and low-achieving students. Sugai (2009) stated that the number one reason most teachers leave their campus or teaching altogether is the lack of classroom management which includes

a more than half of the low-performing classrooms. With the likely hood of receiving a novice teacher, economically and low-achieving students were found to suffer in their educational attainment (Kalogrides et al., 2011).

On the other hand, Protheroe (2010) found learning difficulties with students who are passive aggressive. The students who sit there quietly and cause no discipline problems are routinely overlooked by novice and low-performing teachers alike and, therefore, shortchange the student's full learning potential. Students benefit more from high caliber and motivated teachers instilling a dynamic educational environment conducive to learning, thereby provided the students with greater successes in college settings (Santoli, 2002). In an article by Mehta and Fine (2010), they realized that teachers need to balance the classroom between freedom and structure. They found that some of the best teachers break the learning into manageable but meaningful pieces that allowed the students to engage in their learning in different ways.

In a contrasting view point, Savitz-Romer (2012) found even with highly qualified teachers it was difficult for economically disadvantaged students to even think much less prepare for college.

> High levels of stress, experience with trauma, religious issues, family responsibilities, nontraditional residential experiences, and environmental risk factors individually and collectively shaped students' personal and academic experiences and, consequently, their college planning process. Participants agreed that for students, "getting through the day was hard

> enough," and they believed that "shoving college down their throats" was inappropriate. (Savitz –Romer, 2012, p. 104)

A few of the educators in Savitz-Romer's study (2012) even described how they had bad feelings about promoting college to economically disadvantaged students. The educators explained how the cost of college could leave the student in considerable debt, especially when the students were at extreme risk of not being successful at college. Low postsecondary expectations, unrealistic professional aspirations, and a lack of accurate information about college was a primary concern for educators; however, educators had little insight in how to go about changing the state of affairs. Additionally, it was found that even if the mentor felt the student could succeed at college the mentors were not provided any structure or strategies on how to engage an economically disadvantaged student to the benefits of college.

Chapter 3

Methodology

Environment for the Study

The district

The 5A high school located in southeast Texas resides in a district that is a suburb of a major metropolitan area. This district started out as a one-room schoolhouse over 100 years ago. As of 2013, the Southeast Texas school district had over 38,000 students with approximately 5,000 employees incorporated into 41 campuses. The district was the top 40 largest school districts and was considered to be one of 25 fast growth school districts in the state of Texas. Due to the changeover to STAAR, the last Texas Education Agency rating was “recognized” for the 2011-2012 school year.

District mission statement

The district's mission statement declares, “Our purpose, in partnership with families and community, is to develop each child intellectually, artistically, emotionally, physically, and socially so that all students are life-long learners, complex thinkers, responsible global citizens and effective communicators” ("Mission, Vision, District Goals", 2015).

District vision statement

The district's vision statement declares:

> We envision schools where students and staff are enthusiastically engaged in learning within local and virtual environments. We see schools that encourage collaboration and cultivate a sense of belonging. We see learning standards that are rigorous and relevant. We see learning

> standards that inspire creativity and problem solving. Ultimately, we see schools that prepare students for many paths and that empower them with skills to successfully live in a rapidly changing world. ("Mission, Vision, District Goals", 2015)

The high school

The high school used in this study opened its door in 2006 as a 5A high school consisting of grades nine through 11 and 1,900 students. As of 2013, the high school has grown to educating grades nine through 12 with an enrollment of 2,989 students (TEA, 2013). The high school was built with the Professional Learning Community concept in mind. The building comprises four communities, one being a freshman only community. Each community is split into two houses comprising a total of eight houses, where the students attend their core classes within the same physical location. The purpose was to create a small school setting within a large school framework.

The Professional Learning Community was disbanded in the 2012-2013 school year. Similar subject areas were moved together within each of the houses. For example, the math teachers are no longer distributed across the campus and are now rearranged to have all math teachers' classrooms side-by-side.

TEA reported the demographic breakdown at this campus for the school year 2012-2013 as follows:

- 20.3% African American
- 30.0% Hispanic
- 44.2% white
- 2.6% Asian

- 26.9% economically disadvantaged (TEA, 2014).

Participation rate for the ACT and SAT was 85.4%. The average score on the ACT was 23.2 on the English Language Arts section and 24.3 on the mathematics section. The average score on the SAT was 1,031 on the English Language Arts (ELA) section and 558 on the mathematics section. The high school students scored 47 points higher than the national average of 984 on the SAT ELA sections. The high school students scored 44 points higher than the national average of 514 on the SAT mathematics section (Collage Board, 2013). The high school students scored 2.6 points higher than the national average of 20.6 on the ACT ELA sections. The high school students scored 3.4 points higher than the national average of 20.9 on the ACT mathematics section (American College Testing, 2013).

Purpose of the Study

Methodology explained

The purpose of the study is to determine if significant differences exist between AVID students and non-AVID students, in grades 9-12 regarding whether they achieved math and English TAKS commended status, PSAT scores, frequency of AP exams taken, and AP exam scores. A Pearson chi-square was used to determine if statistically significant differences exist between 179 students who did participate in an AVID program and 1,852 students who did not participate in an AVID program in grades 9-12 and students' math TAKS commended achievement status. A Pearson chi-square was used to determine if statistically significant differences exist between 178 students who did participate in an AVID program and 1,856 students who did not participate in an

AVID program in grades 9-12 and students' English TAKS commended achievement status.

A parametric independent samples two-tail t-test was used to determine if statistically significant differences exist between 120 students who did participate in an AVID program and 577 students who did not participate in an AVID program in grades 9-12 and students' PSAT scores. A Pearson chi-square was used to determine if statistically significant differences exist between 120 students who did participate in an AVID program and 577 students who did not participate in an AVID program in grades 9-12 and students' PSAT college readiness indicator.

A Pearson chi-square was used to determine if statistically significant differences exist between 179 students who did participate in an AVID program and 1,892 students who did not participate in an AVID program in grades 9-12 and students' AP exam frequency. A parametric independent samples two-tail t-test was used to determine if statistically significant differences exist between 132 students who did participate in an AVID program and 1,226 students who did not participate in an AVID program in grades 9-12 and students' AP scores.

The two groups, AVID and non-AVID were also matched-paired based on ethnicity, gender, at-risk status and economically disadvantaged status. A Pearson chi-square, matched-pairs was used to determine if statistically significant differences exist between 175 students who did participate in an AVID program and 175 equaled students who did not participate in an AVID program and the students' math and English TAKS commended achievement status.

A parametric dependent samples two-tail, matched-pairs t-test was used to determine if statistically significant differences exist between 105 students who did participate in an AVID program and 105 equaled students who did not participate in an AVID program and the students' PSAT scores. A Pearson chi-square, matched-pairs was used to determine if statistically significant differences exist between 105 students who did participate in an AVID program and 105 equaled students who did not participate in an AVID program in grades 9-12 and students' PSAT college readiness indicator.

A Pearson chi-square, matched-pairs was used to determine if statistically significant differences exist between 110 students who did participate in an AVID program and 110 equaled students who did not participate in an AVID program and the students' AP exam frequency. A parametric dependent samples two-tail, matched-pairs t-test was used to determine if statistically significant differences exist between 125 students who did participate in an AVID program and 125 equaled students who did not participate in an AVID program and the students' AP scores.

This study also sought the perceptions of AVID educators on the effectiveness the AVID program in closing the achievement gap. This study evaluated the effectiveness of a secondary AVID program on students' college readiness.

Questions for the study

Research question one:

Do statistically significant differences exist between AVID students and non-AVID students regarding whether they achieved math and English TAKS commended status?

Null hypothesis two:

There is no significant difference between AVID and non-AVID students regarding whether they achieved math and English TAKS commended status.

Alternative hypothesis two:

There is a significant difference between AVID and non-AVID students regarding whether they achieved math and English TAKS commended status.

Research question two:

Do statistically significant differences exist between AVID students and non-AVID students on PSAT scores?

Null hypothesis two:

There is no significant difference between AVID and non-AVID students on PSAT scores.

Alternative hypothesis two:

There is a significant difference between AVID and non-AVID students on PSAT scores.

Research question three:

Do statistically significant exist between AVID students and non-AVID students regarding the frequency of AP exams taken?

Null hypothesis three:

There is no significant difference between AVID and non-AVID students regarding the frequency of AP exams taken.

Alternative hypothesis three:

There is a significant difference between AVID and non-AVID students regarding the frequency of AP exams taken.

Research question four:

Do statistically significant differences exist between AVID students and non-AVID students with their scores on AP exams?

Null hypothesis four:

There is no significant difference between AVID and non-AVID students with their scores on AP exams.

Alternative hypothesis four:

There is a significant difference between AVID and non-AVID students with their scores on AP exams.

Research question five:

What are the beliefs of teachers, the AVID coordinator, and the principal regarding the effectiveness of the AVID program?

Design of the Study

Non-matched pair

Using a quasi-experimental design and utilizing archival information, the researcher compared the achievement of AVID students: Group A from the graduating classes of 2011, 2012, and 2013 with Group B from the same graduating classes but had not did participate in an AVID program. The researcher separated students into two sample sets. Group A consisted of students that did participate in an AVID elective class. Group B consisted of students from the same high school graduating cohorts as Group A,

but never did participate in an AVID elective class. This particular analysis did not allow for all factors to be excluded like ethnicity, gender, at-risk status, economically disadvantaged status, family dynamics, and demeanor of the students. The defining difference was whether a student was enrolled in an AVID elective class at the 5A high school located in Southeast Texas.

Population of the study, non-matched pair

The population of students for this study was selected from the graduating classes of 2011, 2012, and 2013 from a 5A high school located in Southeast Texas. The sample groups were comprised of two subsets; the distinguishing factor was student participation in the incorporated AVID elective class. Students were selected and placed in either of two categories or were excluded from the study based upon whether or not they met the criteria of having scores reported.

Group A consisted of the following:

- Students who did participate in the AVID elective class for one or more years at the 5A high school located in Southeast Texas and from either of the graduating cohorts of 2011, 2012, and 2013.
- 179 students were included in this study with regards to math TAKS commended achievement status.
- 178 students were included in this study with regards to English TAKS commended achievement status.
- 120 students were included in this study with regards to PSAT performance.
- 179 students were included in this study with regards to frequency of AP exams taken.

- 132 students were included in this study with regards to AP exam scores.

Group B consisted of the following:

- Students who never did participate in an AVID elective class.
- Students who graduated from the 5A high school located in Southeast Texas and either of the graduating classes of 2011, 2012, and 2013.
- 1,852 students were included in this study with regards to math TAKS commended achievement status.
- 1,856 students were included in this study with regards to English TAKS commended achievement status.
- 577 students were included in this study with regards to PSAT performance.
- 1,892 students were included in this study with regards to frequency of AP tests taken.
- 1,226 students were included in this study with regards to AP exam scores.

Tables 3.1, 3.2, and 3.3 describe the makeup of students in this study.

Table 3.1

Gender of Non-matched Pair AVID and Non-AVID

	Female	Male
Non-AVID	931 (49.2%)	961 (50.8%)
AVID	109 (60.9%)	70 (39.1%)

Table 3.2

Ethnicity of AVID and Non-AVID

	Hispanic	Other	Asian	African American	White
Non-AVID	389 (20.6%)	271 (14.3%)	82 (4.3%)	410 (21.7%)	1147 (60.6%)
AVID	75 (41.9%)	51 (28.5%)	8 (4.5%)	45 (25.1%)	79 (44.1%)

Table 3.3

Identifiers of AVID and Non-AVID

	Economically Disadvantaged	At-Risk
Non-AVID	388 (20.5%)	738 (39.0%)
AVID	62 (34.6%)	47 (26.3%)

Matched pair

Using a quasi-experimental design and utilizing archival information, the researcher compared the achievement of AVID students; Group A from the graduating classes of 2011, 2012, and 2013 with Group B from the same graduating classes but never did participate in an AVID program. The researcher separated students into two sample sets based on gender, ethnicity, at-risk status, and economically disadvantaged status. Group A consisted of students who did participate in an AVID elective class. Group B consisted of students who did not take an AVID elective class and were from the same high school as Group A. This particular matched-paired analysis did allow for the following factors to be included: ethnicity, gender, at-risk status, and economically

disadvantaged status. This particular analysis did not allow for the following factors to be excluded: family dynamics and demeanor of the students.

Population of the study, matched pair

The population of students for this study was selected from the graduating classes of 2011, 2012, and 2013 from a 5A high school located in Southeast Texas. The sample groups were comprised of two subsets, which isolated the distinct factor being whether the student did participate in the incorporated AVID elective class. Students were selected and placed in either of two categories or were excluded from the study based upon whether or not they met the criteria of having scores reported.

Group A consisted of the following:

- Students who did participate in the AVID elective class at the 5A high school located in Southeast Texas and from either of the graduating cohorts of 2011, 2012, and 2013.
- 175 students were included in this study with regards to math TAKS commended achievement status.
- 175 students were included in this study with regards to English TAKS commended achievement status.
- 105 students were included in this study with regards to PSAT performance.
- 176 students were included in this study with regards to frequency of AP tests taken.
- 125 students were included in this study with regards to AP exam scores.

Group B consisted of the following:

- Students who never did participate in an AVID elective class.

- Students who graduated from the 5A high school located in Southeast Texas and either of the graduating classes of 2011, 2012, and 2013.
- 175 students were included in this study with regards to math TAKS commended achievement status.
- 175 students were included in this study with regards to English TAKS commended achievement status.
- 105 students were included in this study with regards to PSAT performance.
- 176 students were included in this study with regards to frequency of AP tests taken.
- 125 students were included in this study with regards to AP exam scores.

Tables 3.4, 3.5, and 3.6 describe the makeup of students in this study with regards to the matched-paired analysis.

Table 3.4

Matched Pair Two-tail T-test AVID and Non-AVID Gender

	Female	Male
Non-AVID	109 (62.3%)	66 (37.7%)
AVID	109 (62.3%)	66 (37.7%)

Table 3.5

Matched Pair Two-tail T-test AVID and Non-AVID Ethnicity

	Hispanic	Other	Asian	African American	White
Non-AVID	74 (42.3%)	49 (28.0%)	49 (28%)	7 (4.0%)	76 (43.4%)

AVID	74 (42.3%)	49 (28.0%	49 (28%)	7 (4.0%)	76 (43.4%)

Table 3.6

Matched Pair Two-tail T-test AVID and Non-AVID Identifiers

	Economically Disadvantaged	At-Risk
Non-AVID	61 (34.9%)	45 (25.7%)
AVID	61 (34.9%)	45 (25.7%)

Measures for non-matched and matched pairs

The following variables were used to determine the statistical significance of the first four research questions. The dependent variables in the study included student achievement in math and English TAKS commended status, PSAT, and AP exam scores. The independent variable in the study included whether a student did participate in the AVID program.

Quantitative Data Analysis

Statistical Package for the Social Sciences (SPSS) and Microsoft Excel software were used to summarize the raw data collected from the southeast Texas school district. All statistical analyses were performed by the SPSS software and were used to describe the data. A Pearson chi-square was used to determine if statistically significant differences exist between AVID students and non-AVID students with regarding whether they achieved math and English TAKS commended status.

A parametric independent samples two-tail t-test was used to determine if statistically significant differences exist between AVID students and non-AVID students with their scores on PSAT. A Pearson chi-square was used to determine if statistically significant differences exist between AVID students and non-AVID students with their PSAT college benchmark readiness status.

A Pearson chi-square was used to determine if statistically significant differences exist between AVID students and non-AVID students with their frequency of AP exams taken. A parametric independent samples two-tail t-test was used to determine if statistically significant differences exist between AVID students and non-AVID students with their scores on AP exams.

The following steps were used to acquire, organize, and analyze the data for this study. The 5A high school students' demographic and achievement data from the graduating classes of 2011, 2012, and 2013 were provided by the participating school district via an Excel spreadsheet. The data had all identifying information removed by the school district prior to being given to the researcher. The anonymous data was loaded into SPSS software and consisted of the following information:

- AVID participation (0 = non-AVID student, 1 = AVID student);
- Math TAKS commended achievement status;
- English TAKS commended achievement status;
- PSAT scores;
    - Critical reading;
    - Math, writing skills;
    - Composite score of critical reading, math and writing;

- Math and writing national percentiles;
- PSAT College readiness benchmark indicator;
- AP exam frequencies
- AP exam scores

The data was examined prior to SPSS entry and any student file missing information was culled and separated from the rest of the data.

Qualitative Analysis

Research question five asked: What are the beliefs of teachers, the AVID coordinator, and the principal regarding the effectiveness of the AVID program? This study sought the beliefs of eight AVID educators by interviewing them with eighteen questions related towards the AVID program's effectiveness on their campus. The responses were categorized for similarities and differences.

Participants

Six AVID elective teachers were asked to participate in this research study from the same high located in Southeast Texas were the quantitative data was collected and used for this research. The researcher individually interviewed each AVID educator. The AVID elective teachers consist of five female and one male teacher with their subject fields varying from English, history, science, and math. The AVID elective teachers were chosen for this research study because they directly interact with AVID students and the AVID elective class.

An AVID coordinator was also asked to participate in this research study. The AVID coordinator has also been an AVID elective teacher. The campus principal was also asked to participate in the research study. The campus principal has not taught an

AVID elective class but does play an integral role in budget and organizational functions of maintaining an effective AVID program.

Permissions

Each AVID educator was asked to participate in this research study and participation was completely voluntary. Each AVID educator was provided a consent form to participate in this research study where they were asked to read and sign. The consent to participate form includes the research study's purpose, procedures, confidentiality information, rights, and arrangements during the interview. The consent to participate form also includes information that the interview would be digitally audio recorded.

Location

This research study was conducted at a large 5A high school located in Southeast Texas where the AVID educators work. Permissions were granted to conduct this research by district personnel and the campus principal. A private conference room was used to conduct each individual interview. This site was chosen to increase the participation level of the AVID elective educators. The researcher has collected each AVID elective educator's schedule and created a specific time to interview each participant during a standard school day. Each interview was conducted with the use of a digital audio recording device.

Semi-structured Interview questions

Eighteen semi-structured interview questions were designed to gain insight into the beliefs of the educators who directly work within the AVID program.

1. How many AVID elective classes have you taught?

2. What AVID elective grade level(s) have you taught?
3. How long have you been in education?
4. What types of initial trainings did you receive before teaching an AVID elective class?
5. Did you feel prepared to teach your first AVID elective class? Why or why not?
6. Have you received any on-going professional development aligned to the AVID program? If so, what?
7. What was the most difficult aspect of teaching the AVID elective class? Why?
8. Do you know what the eleven essential AVID elements are as defined by AVID institute?
9. With the eleven essential AVID elements in mind, which one would you say is most important to the success of the AVID program? Why?
10. What is the greatest single thing that affected the students being prepared for college? Why?
11. What is the greatest single thing that affected the students being prepared for the math TAKS test and reaching the commended mark? Why?
12. What is the greatest single thing that affected the students being prepared for the English TAKS test and reaching the commended mark? Why?
13. What is the greatest single thing that affected the students being prepared for the PSAT? Why?
14. What is the greatest single thing that affected the students being prepared for advanced course work like AP? Why?

15. What is the greatest single thing that affected the students being prepared for the AP exams? Why?
16. What indicators have you used to consider an AVID student college ready? Why?
17. Do you feel the campus administration is supporting the AVID program?
    a. If yes, then what has the campus administrators done well?
    b. If no, how should the campus administrators help support the AVID program?
18. Do you feel the district is supporting the AVID program?
    a. If yes, then what has the district done well?
    b. If no, how should the district support the AVID program?

Responses

The viewpoints of eight AVID educators were attained via individual interviews. The researcher sought to determine similar and contrasting opinions by interviewing each of the AVID educators. The semi-structured interview questions and the participants' responses were digitally audio recorded and were transcribed for analysis. Each participant's identity was masked and kept confidential.

Data analysis

The researcher developed 18 semi-structured interview questions that sought the insight and beliefs of the AVID educators and the effectiveness of the AVID program on developing college-ready students. A thematic analysis method approach was used to identify, analyze, and report patterns with the AVID educator response to the 18 semi-structured interview questions.

Chapter 4

Results

In this chapter, the results for each of the research questions previously discussed will be presented.

The purpose of the study is to determine if significant differences exist between AVID students and non-AVID students regarding whether they achieved math and English TAKS commended status, PSAT scores, frequency of AP exams taken, and AP exam scores between students who did participate in an AVID program and did not participate in an AVID program in grades 9-12. This study also sought the perceptions of AVID educators on the effectiveness the AVID program in closing the achievement gap. This study evaluated the effectiveness of a secondary AVID program on students' college readiness.

Research question one:

Do statistically significant differences exist between AVID students and non-AVID students regarding whether they achieved math and English TAKS commended status?

To address this research question, Pearson chi-square statistical procedures were used. This statistical procedure was viewed as the optimal statistical procedure to use because frequency data were present for students who did participate or did not participate in the AVID program and for their TAKS math and English commended achievements. As such, chi-squares are the statistical procedure of choice when variables are categorical. The available sample size per cell was more than five. Therefore, the assumptions for utilizing a chi-square were met.

TAKS English commended: non-matched pair Pearson chi-square.

For the first research question regarding AVID participation or non-participation and TAKS English commended achievements, the result was not statistically significant, $\chi^2(1) = 0.84$, $p = .359$. As revealed in Table 4.1, 23.0% of students who did participate in AVID met the TAKS English commended performance, compared to 26.2% of students who did not participate in AVID. Accordingly, a slightly, but not statistically significantly, higher percentage of non-AVID students met the TAKS English commended performance than did students who did participate in the AVID program.

Table 4.1

Frequencies and Percentages by AVID Participation or Non-Participation Who Met the TAKS English Commended Performance

AVID Participation	NOT commended *n* and %age	commended *n* and %age
Did NOT Participate	1370 (73.8%)	486 (26.2%)
Did Participate	137 (77.0%)	41 (23.0%)

TAKS English commended: matched pair Pearson chi-square.

To further address the first research question a Pearson chi-square statistical procedure were used. This statistical procedure was viewed as the optimal statistical procedure to use because frequency data were present for students who did participate or did not participate in the AVID program and for their TAKS math and English commended achievements. Each AVID student was matched to a non-AVID student by using the following identifiers gender, ethnicity, economically disadvantaged status, and

at-risk status. As such, chi-squares are the statistical procedure of choice when variables are categorical. The available sample size per cell was more than five. Therefore, the assumptions for utilizing a chi-square were met.

For the first research question regarding matched pairs of AVID participation to non-participation and TAKS English commended achievements, the result was not statistically significant, $\chi^2(1) = 3.63$, $p = .057$. The effect size for this finding, Cramer's V, was low, .102 (Cohen, 1988). As revealed in Table 4.2, 23.4% of students who did participate in AVID met the TAKS English commended performance, compared to 32.5% of students who did not participate in AVID. Accordingly, a slightly, but not statistically significantly, higher percentage of non-AVID students met the TAKS English commended performance than did students who participate in the AVID program.

Table 4.2

Frequencies and Percentages by AVID Participation or Non-Participation Who Met the TAKS English Commended Performance

AVID Participation	NOT commended *n* and %age	commended *n* and %age
Did NOT Participate	118 (67.4%)	57 (32.5%)
Did Participate	134 (76.6%)	41 (23.4%)

TAKS mathematics commended: non-matched pair Pearson chi-square.

With respect to the first research question regarding AVID participation or non-participation and TAKS mathematics commended achievements, a statistically significant

difference was present, $\chi^2(1) = 4.81$, $p = .028$. The effect size for this finding, Cramer's *V*, was trivial, .049 (Cohen, 1988). As delineated in Table 4.3, 20.7% of students who did participate in AVID met the TAKS mathematics commended performance, compared to 28.3% of students who did not participate in AVID. As such, a higher percentage of students who did not participate in AVID met the TAKS mathematics commended Performance than did students who did participate in AVID.

Table 4.3

Frequencies and Percentages by AVID Participation or Non-Participation Who Met the TAKS Mathematics Commended Performance

AVID Participation	NOT commended *n* and %age	commended *n* and %age
Did NOT Participate	1327 (71.7%)	525 (28.3%)
Did Participate	142 (79.3%)	37 (20.7%)

TAKS mathematics commended: matched pair Pearson chi-square.

With respect to the first research question regarding matched pairs of AVID participation to non-participation and TAKS mathematics commended achievements, a statistically significant difference was present, $\chi^2(1) = 9.58$, $p = .002$. The effect size for this finding, Cramer's *V*, was low, .165 (Cohen, 1988). As delineated in Table 4.4, 20.6% of students who did participate in AVID met the TAKS mathematics commended performance, compared to 35.4% of students who did not participate in AVID. As such, a higher percentage of students who did not participate in AVID met the TAKS mathematics commended performance than did students who did participate in AVID.

Table 4.4

Frequencies and Percentages by AVID Participation or Non-Participation Who Met the TAKS Mathematics Commended Performance

AVID Participation	NOT commended *n* and %age	commended *n* and %age
Did NOT Participate	113 (64.6%)	62 (35.4%)
Did Participate	139 (79.4%)	36 (20.6%)

Research question two:

Do statistically significant differences exist between AVID students and non-AVID students on PSAT scores?

To answer this second research question, six reported scores on the PSAT (i.e., critical reading, math, writing skills, composite score of critical reading, math and writing, critical reading, math and writing national percentiles) were analyzed using parametric independent samples two-tail t-test. The PSAT college readiness indicators were analyzed using a Pearson chi-square. In this research question, the independent variable remained participation or non-participation in the AVID program. The dependent variables for this second research question were interval/ratio level data (i.e., test scores). The underlying assumptions of normality were checked for each of the eight PSAT scores and were determined to be met.

PSAT critical reading score: non-matched pair two-tail t-test.

With respect to the PSAT critical reading score, the parametric independent samples two-tail t-test revealed a statistically significant difference, $t(216.3) = 2.00$, $p =$

.047, between students who did participate in AVID and students who did not participate in AVID. The effect size, or Cohen's d, for this difference was 0.27, or small (Cohen, 1988). As noted in Table 4.5, students who did not participate in AVID had a significant difference however, only marginally higher PSAT critical reading scores than students who did participate in AVID.

Table 4.5

Descriptive Statistics by AVID Participation or Non-Participation on the PSAT Critical Reading Measure

AVID Participation	n	M	SD
Did NOT Participate	577	46.23	9.33
Did Participate	120	44.73	7.02

To further answer this second research question, seven reported scores on the PSAT (i.e., critical reading, math, writing skills, composite score of critical reading, math and writing, critical reading, math and writing national percentiles, and college readiness benchmark) were analyzed using parametric dependent samples two-tail matched-paired samples t-test. In this research question, the independent variable remained participation or non-participation in the AVID program. The dependent variables for this first research question were interval/ratio level data (i.e., test scores). Each AVID student was matched to a non-AVID student by using the following identifiers gender, ethnicity, economically disadvantaged status, and at-risk status. The underlying assumptions of normality were checked for each of the eight PSAT scores and were determined to be met

PSAT critical reading scores: matched pair two-tail t-test.

To further address the second research question with respect to the PSAT critical reading scores, a Pearson chi-square, matched-paired revealed the presence of a statistically significant difference, $t(104) = 3.68$, $p = .000$, between students who did participate in AVID and students who did not participate in AVID. The effect size, or Cohen's d, for this difference was 0.38, or medium (Cohen, 1988). As noted in Table 4.6, non-AVID students had a significantly higher percentage of PSAT critical reading scores than students who did participate in AVID.

Table 4.6

Descriptive Statistics by AVID Participation or Non-Participation on the PSAT Critical Reading Measure

AVID Participation	n	M	SD
Did NOT Participate	105	47.78	9.23
Did Participate	105	44.61	7.11

PSAT math scores: non-matched pair two-tail t-test.

To further address the second research question with respect to the PSAT math scores, the parametric independent samples two-tail t-test revealed the presence of a statistically significant difference, $t(221.3) = 2.78$, $p = .006$, between students who did participate in AVID and students who did not participate in AVID. The effect size, or Cohen's d, for this difference was 0.37, or medium (Cohen, 1988). As noted in Table 4.7, students who did not did participate in AVID had statistically significantly higher PSAT math scores than students who did participate in AVID.

Table 4.7

Descriptive Statistics by AVID Participation or Non-Participation on the PSAT Math Measure

AVID Participation	n	M	SD
Did NOT Participate	577	47.33	9.36
Did Participate	120	45.28	6.89

PSAT math scores: matched pair two-tail t-test.

To further address the second research question with respect to the PSAT math scores, the parametric dependent samples two-tail matched-paired samples t-test revealed the presence of a statistically significant difference, $t(104) = 8.67$, $p = .000$, between students who did participate in AVID and students who did not participate in AVID. The effect size, or Cohen's d, for this difference was 0.28, or small (Cohen, 1988). As noted in Table 4.8, non-AVID students had a significantly higher percentage of PSAT math scores than students who did participate in AVID.

Table 4.8

Descriptive Statistics by AVID Participation or Non-Participation on the PSAT Math Measure

AVID Participation	n	M	SD
Did NOT Participate	105	47.47	9.00
Did Participate	105	45.20	7.04

PSAT writing skill scores: non-matched pair two-tail t-test.

To further address the second research question with respect to the PSAT writing skill scores, the parametric independent samples two-tail t-test revealed no statistically significant difference, $t(206.6) = 1.43$, $p = .154$, between students who did participate in AVID and students who did not participate in AVID. The effect size, or Cohen's d, for this difference was 0.20, or small (Cohen, 1988). As noted in Table 4.9, non-AVID students had marginally higher PSAT writing skill scores than students who did participate in AVID.

Table 4.9

Descriptive Statistics by AVID Participation or Non-Participation on the PSAT Writing Skill Measure

AVID Participation	n	M	SD
Did NOT Participate	577	43.24	9.15
Did Participate	120	42.15	7.23

PSAT writing skill scores: matched pair two-tail t-test.

To further address the second research question with respect to the PSAT writing skill scores, the parametric dependent two-tail samples two-tail matched-paired samples t-test revealed the presence of a statistically significant difference, $t(104) = 2.68$, $p = .000$, between students who did participate in AVID and students who did not participate in AVID. The effect size, or Cohen's d, for this difference was 0.30, or medium (Cohen, 1988). As noted in Table 4.10, non-AVID students had a significantly higher percentage of PSAT writing skill scores than students who did participate in AVID.

Table 4.10

Descriptive Statistics by AVID Participation or Non-Participation on the PSAT Writing Skill Measure

AVID Participation	n	M	SD
Did NOT Participate	105	44.15	8.12
Did Participate	105	41.88	7.21

PSAT composite score of critical reading, mathematics, and writing skills scores: non-matched pair two-tail t-test.

To further address the second research question with respect to the PSAT composite score of critical reading, mathematics, and writing skills scores, the parametric independent samples two-tail t-test revealed the presence of a statistically significant difference, $t(230.6) = 2.43$, $p = .016$, between students who did participate in AVID and students who did not participate in AVID. The effect size, or Cohen's d, for this difference was 0.32, or medium (Cohen, 1988). As noted in Table 4.11, students who did participate in AVID had statistically significantly lower PSAT composite score of critical reading, mathematics, and writing skills scores than students who did participate in

Table 4.11

Descriptive Statistics by AVID Participation or Non-Participation on the PSAT Composite Score of Critical Reading, Mathematics, and Writing Skills Measure

AVID Participation	n	M	SD
Did NOT Participate	577	136.8	24.9
Did Participate	120	132.2	17.6

PSAT composite score of critical reading, mathematics, and writing skills scores: matched pair two-tail t-test.

To further address the second research question with respect to the PSAT composite score of critical reading, mathematics, and writing skills scores, the parametric dependent samples two-tail matched-paired samples t-test revealed the presence of a statistically significant difference, $t(104) = 10.59$, $p = .000$, between students who did participate in AVID and students who did not participate in AVID. The effect size, or Cohen's d, for this difference was 0.33, or medium (Cohen, 1988). As noted in Table 4.12, non-AVID students had a significantly higher percentage of PSAT composite score of critical reading, mathematics, and writing scores than students who did participate in AVID.

Table 4.12

Descriptive Statistics by AVID Participation or Non-Participation on the PSAT Composite Score of Critical Reading, Mathematics, and Writing Measure

AVID Participation	n	M	SD
Did NOT Participate	105	138.62	22.5
Did Participate	105	131.89	18.0

PSAT critical reading national percentile scores: non-matched pair two-tail t-test.

To further address the second research question with respect to the PSAT critical reading national percentiles, the parametric independent samples two-tail t-test revealed the presence of a statistically significant difference, $t(196.5) = 3.78$, $p = .000$, between students who did participate in AVID and students who did not participate in AVID. The effect size, or Cohen's d, for this difference was 0.54, or medium (Cohen, 1988). As noted in Table 4.13, non-AVID had statistically significantly higher PSAT critical reading national percentiles than students who did participate in AVID.

Table 4.13

Descriptive Statistics by AVID Participation or Non-Participation on the PSAT Critical Reading National Percentiles

AVID Participation	n	M	SD
Did NOT Participate	577	50.7	24.3
Did Participate	120	42.7	20.3

PSAT critical reading national percentile scores, matched pair two-tail t-test.

To further address the second research question with respect to the PSAT critical reading national percentiles scores, the parametric dependent samples two-tail matched-paired samples t-test revealed the presence of a statistically significant difference, $t(104) = 14.24$, $p = .000$, between students who did participate in AVID and students who did not participate in AVID. The effect size, or Cohen's d, for this difference was .48, or medium (Cohen, 1988). As noted in Table 4.14, non-AVID students had a significantly higher percentage of PSAT critical reading national percentiles scores than students who did participate in AVID.

Table 4.14

Descriptive Statistics by AVID Participation or Non-Participation on the PSAT Critical Reading National Percentiles

AVID Participation	n	M	SD
Did NOT Participate	105	53.66	24.7
Did Participate	105	42.74	20.9

PSAT mathematics national percentile scores, non-matched pair two-tail t-test.

To further address the second research question with respect to the PSAT mathematics national percentiles, the parametric independent samples two-tail t-test revealed the presence of a statistically significant difference, $t(207.8) = 3.99$, $p = .000$, between students who did participate in AVID and students who did not participate in AVID. The effect size, or Cohen's d, for this difference was 0.55, or medium (Cohen, 1988). As noted in Table 4.15, non-AVID had statistically significantly higher PSAT math national percentiles than students who did participate in AVID.

Table 4.15

Descriptive Statistics by AVID Participation or Non-Participation on the PSAT Math National Percentiles

AVID Participation	n	M	SD
Did NOT Participate	577	50.3	24.4
Did Participate	120	42.2	19.2

PSAT mathematics national percentile scores: matched pair two-tail t-test.

To further address the second research question with respect to the PSAT mathematics national percentiles scores, the parametric dependent samples two-tail matched-paired samples t-test revealed the presence of a statistically significant difference, $t(104) = 21.61$, $p = .000$, between students who did participate in AVID and students who did not participate in AVID. The effect size, or Cohen's d, for this difference was .49, or medium (Cohen, 1988). As noted in Table 4.16, non-AVID

students had a significantly higher percentage of PSAT mathematics national percentiles scores than students who did participate in AVID.

Table 4.16

Descriptive Statistics by AVID Participation or Non-Participation on the PSAT Mathematics National Percentiles Measure

AVID Participation	n	M	SD
Did NOT Participate	105	51.63	22.6
Did Participate	105	41.33	19.2

PSAT writing national percentile scores: non-matched pair two-tail t-test.

To further address the second research question with respect to the PSAT writing national percentiles scores, the parametric independent samples two-tail t-test revealed the presence of a statistically significant difference, $t(192.2) = 2.74$, $p = .007$, between students who did participate in AVID and students who did not participate in AVID. The effect size, or Cohen's d, for this difference was 0.40, or medium (Cohen, 1988). As noted in Table 4.17, non-AVID had statistically significantly lower PSAT writing national percentiles than students who did participate in AVID.

Table 4.17

Descriptive Statistics by AVID Participation or Non-Participation on the PSAT Writing National Percentiles

AVID Participation	n	M	SD
Did NOT Participate	577	48.3	25.0
Did Participate	120	42.2	21.5

PSAT writing national percentile scores: matched pair two-tail t-test.

To further address the second research question with respect to the PSAT writing national percentiles scores, the parametric dependent samples two-tail matched-paired samples t-test revealed the presence of a statistically significant difference, $t(104) = 13.45$, $p = .000$, between students who did participate in AVID and students who did not participate in AVID. The effect size, or Cohen's d, for this difference was .31, or medium (Cohen, 1988). As noted in Table 4.18, non-AVID students had a significantly higher percentage of PSAT writing national percentiles scores than students who did participate in AVID.

Table 4.18

Descriptive Statistics by AVID Participation or Non-Participation on the PSAT Writing National Percentiles Measure

AVID Participation	n	M	SD
Did NOT Participate	105	48.86	23.6
Did Participate	105	41.88	21.3

PSAT college readiness benchmark: non-matched pair Pearson chi-square.

For the second research question regarding AVID participation or non-participation and PSAT college readiness benchmark, the result was statistically significant, $\chi^2(1) = 14.2$, $p = .000$. The effect size for this finding, Cramer's *V*, was low, .143 (Cohen, 1988). As revealed in Table 4.19, 12.5% of students who did participate in AVID met the PSAT college readiness benchmark, compared to 29.2% of students who did not participate in AVID. Accordingly, a statistically significantly, higher percentage of non-AVID students met the PSAT college readiness benchmark than did students who did participate in the AVID program.

Table 4.19

Frequencies and Percentages by AVID Participation or Non-Participation Who Met the PSAT College Readiness Benchmark

AVID Participation	NOT commended *n* and %age	commended *n* and %age
Did NOT Participate	408 (70.8%)	168 (29.2%)
Did Participate	105 (87.5%)	15 (12.5%)

PSAT college readiness benchmark: matched pair Pearson chi-square.

For the second research question regarding AVID participation or non-participation and PSAT college readiness benchmark achievement, the result was statistically significant, $\chi^2(1) = 8.9$, $p = .003$. The effect size for this finding, Cramer's *V*, was low, .201 (Cohen, 1988). As revealed in Table 4.20, 12.7% of AVID students were considered to be college ready by their PSAT scores and the benchmark set by College

Board, compared to 29.1% of students who did not participate in AVID. Accordingly, a statistically significantly, higher percentage non-AVID students were considered college ready by their PSAT scores and the benchmark set by College Board than did students who did participate in the AVID program.

Table 4.20

Frequencies and Percentages by AVID Participation or Non-Participation Who Met the PSAT College Readiness Benchmark

AVID Participation	Did Not Take AP Exam *n* and %age	Took AP Exam *n* and %age
Did NOT Participate	78 (70.9%)	32 (29.1%)
Did Participate	96 (87.3%)	14 (12.7%)

Research question three:

Do statistically significant exist between AVID students and non-AVID students regarding the frequency of AP exams taken?

AP exam frequency: non-matched pair Pearson chi-square.

For the third research question regarding AVID participation or non-participation and frequency of the AP exam taken, the result was statistically significant, $\chi^2(1) = 15.0$, $p = .000$. The effect size for this finding, Cramer's V, was trivial, .085 (Cohen, 1988). As revealed in Table 4.21, 33.0% of students who did participate in AVID took the AP exam, compared to 20.5% of students who did not participate in AVID. Accordingly, a statistically significantly, lower percentage non-AVID students took the AP exam than students who did participate in the AVID program.

Table 4.21

Frequencies and Percentages by AVID Participation or Non-Participation AP Exam

AVID Participation	Did Not Take AP Exam *n* and %age	Took AP Exam *n* and %age
Did NOT Participate	1504 (79.5%)	388 (20.5%)
Did Participate	120 (67.0%)	59 (33.0%)

AP exam frequency: matched pair Pearson chi-square.

For the third research question regarding AVID participation or non-participation and frequency of the AP exam taken, the result was not statistically significant, $\chi^2(1) = 1.7$, $p = .198$. The effect size for this finding, Cramer's *V*, was trivial, .069 (Cohen, 1988). As revealed in Table 4.22, 32.4% of AVID students took an AP exam, compared to 26.1% of students who did not participate in AVID. Though not significantly different, a lower percentage of non-AVID students took an AP exam than did students who did participate in the AVID program.

Table 4.22

Frequencies and Percentages by AVID Participation or Non-Participation AP Exam

AVID Participation	Did Not Take AP Exam *n* and %age	Took AP Exam *n* and %age
Did NOT Participate	130 (73.9%)	46 (26.1%)
Did Participate	119 (67.6%)	57 (32.4%)

Research question four:

Do statistically significant differences exist between AVID students and non-AVID students with their scores on AP exams?

AP exam scores: non-matched pair two-tail t-test.

To address the fourth research question with respect to the AP exam scores, the parametric independent samples two-tail t-test revealed the presence of a statistically significant difference, $t(177) = 4.78$, $p = .000$, between students who did participate in AVID and students who did not participate in AVID. The effect size, or Cohen's d, for this difference was 0.72, or large (Cohen, 1988). As Table 4.23 shows non-AVID students scored higher than AVID students on AP exams.

Table 4.23

Descriptive Statistics by AVID Participation or Non-Participation and AP scores

AVID Participation	n	M	SD
Did NOT Participate	1226	2.91	1.14
Did Participate	132	2.49	.92

AP exam scores: matched pair two-tail t-test.

To further address the fourth research question with respect to the AP scores, the parametric dependent samples two-tail matched-paired samples t-test revealed no statistically significant difference, $t(124) = 1.42$, $p = .159$, between students who did participate in AVID and students who did not participate in AVID. The effect size, or Cohen's d, for this difference was 0.17, or small (Cohen, 1988). As noted in Table 4.24,

non-AVID students matched with AVID students had slightly higher scores on AP exams.

Table 4.24

Descriptive Statistics by AVID Participation or Non-Participation and AP scores

AVID Participation	n	M	SD
Did NOT Participate	125	2.70	1.06
Did Participate	125	2.53	.92

Table 4.25 shows AVID students performed marginally but not significantly lower than non-AVID students with regards to PSAT writing skill, non-matched pairs and AP exam scores, matched pairs. Yet, Table 4.26 shows AVID students took more AP exams than non-AVID within the matched pairs analysis. Furthermore, as shown in Table 4.26 non-AVID and AVID students showed no significant differences with regards to TAKS English commended non-matched and matched pairs. Also, Table 4.26 shows a significant difference where the matched pairs AVID students took more AP exams, than non-AVID students.

Table 4.25

P-Values, Non-matched and Matched Pairs

	P-values Non-Matched Pairs	P-values Matched Pairs
Critical reading	.047	.000
Math	.006	.000
Writing skill	.154	.000
Composite score of critical reading, math, writing	.016	.000
Critical reading national percentiles	.000	.000
Math national percentiles	.000	.000
Writing national percentiles	.007	.000
AP exam scores	.000	.159

*p < .05

Table 4.26

χ^2-Values, Non-matched and Matched Pairs

	χ^2-values Non-Matched Pairs	χ^2-values Matched Pairs
TAKS English commended	.359	.057
TAKS math commended	.028	.002
College readiness benchmark	.000	.003
Frequency of AP exams	.000	.198

*p < .05

Qualitative Data

Research question five:

What are the beliefs of teachers, the AVID coordinator, and the principal regarding the effectiveness of the AVID program?

Eighteen semi-structured interview questions were designed to gain insight into the beliefs of the educators who directly work within the AVID program.

Interview question one: How many AVID elective classes have you taught?

The participants' responses varied from one to eight AVID elective classes and table 4.27 shows each participant. The fourth participant has the second most experience with teaching the AVID elective class and is the district's AVID coordinator. The final respondent was the building principal and has no experience teaching an AVID elective class.

Table 4.27

Number of AVID Elective Classes Taught by the Interviewed Participants

Participant	AVID Elective Classes Taught n
1	5
2	2
3	1
4	5
5	8
6	4
7	1
8	0

Interview question two: What AVID elective grade level(s) have you taught? The participants' responses varied from teaching one grade level to all high school grade levels and table 4.28 details each response. The third participant was an AVID teacher at a middle school campus in the same district as the high school and the middle school students feed into the high school where this study is being conducted. The eighth participant is the building principal and responded that he had worked on three different campuses that offered the AVID elective classes.

Table 4.28

AVID Elective Grade Level Taught by the Interviewed Participants

Participant	Grade Levels
1	9, 10, 11, 12
2	10
3	8
4	9, 10, 11, 12
5	9, 10, 11, 12
6	9, 11, 12
7	9
8	0

Interview question three: How long have you been in education? The participants' responses varied from five to twenty years and table 4.29 details each response.

Table 4.29

Years in Education of Each Participant

Participant	Years of Experience
1	11
2	5
3	9
4	20
5	14
6	17
7	10
8	21

Interview question four: What types of initial trainings did you receive before teaching an AVID elective class? Six of the participants attended the AVID summer institute and took a Level One Course, "Implementation", prior to teaching the AVID elective class. One of the participants received emergency training from the school district when she was selected to teach an AVID elective class during the middle of a school year. Two participants, including the principal attended one summer institute while working in another school district.

Interview question five: Did you feel prepared to teach your first AVID elective class? Why or why not? Two of the participants felt they were not fully prepared to teach the AVID elective class and further elaborated that there was too much information to cover with the AVID students and not enough time. Four of the participants felt they

were ready to teach the AVID elective class. However, once the AVID class started, the four teachers became overwhelmed with the massive amount of resources available from AVID in trying to teach all of the elements each week. One of the participants took the approach that she is never fully prepared to initially teach any class. Two of the participants further elaborated that they were currently using AVID's Week-at-a-Glance that helped outline each week as what material should be presented to the students.

Interview question six: Have you received any on-going professional development aligned to the AVID program? If so, what? Four of the participants stated they have attended the AVID summer institute every summer since they began teaching the AVID elective class. They further elaborated that the school district is very supportive of having them continue their AVID training each summer. One participant stated that she did not attend the AVID summer institute due to financial restraints of the school district. The participant further elaborated that the campus was allowed to send only six AVID teachers to the summer institute. She was not one of the chosen to attend the AVID summer institute since the other six teachers were new to the AVID program. One of the participants reported the use of AVID boost videos through the AVID website was very beneficial. Furthermore, the respondent stated the boost videos are a way for her to remain focused throughout the school year with the AVID curriculum.

Interview question seven: What was the most difficult aspect of teaching the AVID elective class? Why? One participant stated that her own "unrealistic expectations of the students" was what held her back the first year with teaching the AVID elective class. Furthermore, the teacher elaborated about how the students choose to interview and take the AVID class and she did not understand why they were not always fully

motivated to put in the work. Another AVID teacher responded, “I kept having to tell them when things were due and remind them of what we were to accomplish.”

One participant stated that she found it difficult to balance AVID’s core requirements, or eleven essential elements, on a weekly basis. An AVID teacher responded, “I had to make sure I found the time to do the quality elements but not make it a difficult class and still hold them to a high standard without totally stressing [the AVID students] out.”

One participant found the students themselves were difficult to teach due to their backgrounds. An AVID teacher responded with, “If you are truly finding those middle students, those First Generation College students then they are a difficult group to teach.” This participant also responded with how the relationships between this person and the students were like a parent-child dynamic. The participant responded with, “At times, they would do the opposite of what I told them to do just like a typical parent-child relationship.”

One participant found the tutoring to be cumbersome. An AVID teacher responded with, “Once I got past the first two years of teaching the AVID elective class then I figured out how to handle tutoring.” The participant further elaborated the difficulty with finding, selecting, and training quality AVID tutors. Eventually, the AVID teacher realized that she needed to step back during tutoring times and just facilitate the learning process between the AVID student and tutor.

One participant found the variations between AVID students to be difficult, as some of the AVID students came to class full of motivation and drive, while others had to be pushed and prodded to complete AVID assignments. An AVID teacher responded,

"Dealing with twenty to thirty students each with different goals and needs" was the most difficult aspect of the AVID elective class.

One participant stated that she "cared more about the students' success than they did for themselves." Furthermore, the AVID teacher responded how the AVID students all wanted to go to a top university but they were not willing to put in the extra work, like the college essay.

One participant responded that the AVID class "is a major time" commitment and a teacher that does not understand that from the beginning, he or she will struggle. The principal responded with, "The [AVID] program itself is great, but it really depends on the instructor."

Interview question eight: Do you know what the eleven essential AVID elements are as defined by AVID institute? All of the participants knew of the eleven essential elements but most could not name all elements from memory. One of the respondents referred to the eleven essential elements as "those damn binders."

Interview question nine: With the eleven essential AVID elements in mind, which one would you say is most important to the success of the AVID program? Why? Three participants stated that student selection was most important. An AVID teacher responded with, "If the other ten [essential elements] are not clicking then it can be because the students were not chosen correctly, including the teachers for the AVID class." One of the participants elaborated that if the middle grade point average students and First Generation College bound students are selected properly, then most of them stay with the AVID program throughout their high school career. An AVID teacher

responded, “If a student doesn’t choose to buy-in then none of the other [essential elements] really matter.”

Three other participants stated that the students being exposed to rigorous course work (i.e., advanced placement) was the most important and essential element. An AVID teacher responded, “The biggest indicator of college success is the rigor of high school courses.” One of the participants stated when students were allowed to stop taking advanced courses but remain in the AVID program that the program “breaks down.” The AVID teacher responded, “The student no longer brings questions to the tutoring sessions” when they are not being pushed by advanced course work. The principal stated, “The AVID student should take an advanced course.”

One participant stated the tutoring structure required by AVID to be the most important essential element. One participant stated school-wide implementation was most important where the AVID strategies are deployed campus wide.

Interview question ten: What is the greatest single thing that affected the students being prepared for college? Why? One participant stated the students are required to complete five college essays by the end of their senior year. Furthermore, the AVID teacher explained how AVID students peer edit each other's college essay and this alone is highly effective in building a college going, collaborative team atmosphere.

Four of the participants stated how the tutoring process was beneficial to be college ready by learning how to form study groups and break down confusing problems to a specific area. An AVID teacher responded, “the tutors are really important since they get to build a bond with the students, the kids look up to the tutors.” Another AVID

teacher responded, “knowing how to breakdown a problem and provide the point of confusion,” is a critical skill for any student to be college ready.

Two of the participants stated how critical thinking through rigorous course work prepared students for college. An AVID coordinator stated that 72% of the high school students attend college and 94% of the AVID students attend college. Furthermore, the AVID coordinator stated how the 6% of AVID students join the military.

Interview question eleven: What is the greatest single thing that affected the students being prepared for the math TAKS test and reaching the commended mark? Why? All of the participants responded that they did not use any enrichment methods to increase the math TAKS commended achievement status. However, four of the AVID teachers stated they would organize two weeks of enrichment exercises directed at merely passing the math TAKS state standardized exam.

Interview question twelve: What is the greatest single thing that affected the students being prepared for the English TAKS test and reaching the commended mark? Why? All of the participants responded that they did not use any enrichment methods to increase the English TAKS commended achievement status. Furthermore, one participant stated the English TAKS exam overall was not a focus and was due to low math scores and high English scores. One participant responded that since she taught English she did spend some time explaining what the AVID students “could include in the TAKS essay.”

Interview question thirteen: What is the greatest single thing that affected the students being prepared for the PSAT? Why? Two participants stated they were given “boxes of PSAT tests” and had the student take practice exams. One AVID teacher stated the PSAT preparation time was built into the week-at-a-glance documents provided by

AVID. Furthermore, the participant elaborated that if an AVID student did not have any questions for the AVID tutor then the AVID student would work on PSAT preparation material. Three participants folded into the AVID daily assignments commonly found PSAT vocabulary words and periodically practiced with analogy exercises.

Interview question fourteen: What is the greatest single thing that affected the students being prepared for advanced course work like AP? Why? One participant stated the Socratic seminars helped the AVID student prepare for the rigors of advanced course work. An AVID teacher responded, "The Socratic seminar taught the students how to read about a topic and then talk about it as a group." Five of the participants described the tutoring process to be the most benefit to the AVID students and preparedness for advanced course work. "Since most of the students take the same advanced courses then they can work together in peer groups within tutorial time," stated an AVID teacher.

Interview question fifteen: What is the greatest single thing that affected the students being prepared for the AP exams? Why? Two participants stated they did not focus in on the AP exam in the AVID elective class but believed the AP teachers provided extra study sessions prior to the AP exam. Two participants stated they set aside tutoring time prior to the AP exam that greatly helped the AVID students be prepared for the AP exam.

Interview question sixteen: What indicators have you used to consider an AVID student college ready? Why? Two participants believed a student's motivation was the largest indicator for college readiness. "I can't teach self-motivation but I can encourage it," stated one AVID teacher. One participant believed that finding the "right students" for the AVID program made the greatest effect on college readiness, as the "right

students" were more self-motivated. One participant believed if the AVID students took the college essay seriously then that would help them become college ready by the time the student reached their senior year. One participant examined AVID students' grade point averages and AP scores. The participant felt if an AVID student could achieve a three, four, or five on the AP exam then they were what she considered to be college ready.

Interview question seventeen: Do you feel the campus administration is supporting the AVID program? If yes, then what has the campus administrators done well? If no, how should the campus administrators help support the AVID program?

Two participants believe the campus administration is very supportive and strategically decides who the new AVID teachers should be. Furthermore, the two participants expressed deep respect for the newest assistant principal as he has extensive AVID background and he has treat the AVID program as a priority. Three participants believed that campus administrative support has slowly eroded over time. Furthermore, the three participants believe the increased turnover rate of teachers and counselors has caused the AVID program to suffer, as the new hires are not properly informed of the capabilities and processes of the AVID elective classes. "Students were just put in the AVID class without the student even applying and a student interview," stated one participant. "By the end of my last year of teaching the AVID class, it was rare for a principal to participate in any parts of the AVID process," stated one participant. "I did not even know that we had an AVID principal until last week," stated one participant. "This is late in the school year and we have not even talked about who will teach AVID next year," stated one participant.

Interview question eighteen; Do you feel the district is supporting the AVID program? If yes, then what has the district done well? If no, how should the district support the AVID program?

Two participants stated the district was supporting the AVID program "as well as it can." Furthermore, the district is doing a good job of promoting the AVID program to the community. One participant believed the previous AVID coordinator did a fantastic job. The current AVID coordinator has been assigned with four or five other large obligations outside of the AVID program that have occupied her attention away from AVID. Due to the other duties as assigned, the AVID coordinator does not have enough time to have the same focus as the previous AVID coordinator.

One participant described how expensive the AVID program is for the district and campuses. Furthermore, the major expense at the campus level is the allocation of personnel, including AVID tutors and has caused some campuses to stop offering the AVID elective classes. Another participant felt a disconnect between district and campuses and also between feeder middle schools to the high school. "We only had eight students that interviewed to take the AVID class in the ninth grade," stated one participant.

Chapter 5

Conclusions

Introduction

The enrollment of Hispanic and African American students continues to increase in the state of Texas while the enrollment of white students is declining (TEA, 2012). Many African Americans and Hispanics experience double isolation by the attributes of race and poverty. African Americans and Hispanics are three times more likely to grow up in poverty than whites (Klofenstein, 2003; Tough, 2006). In Texas, 60.3% of students are classified as economically disadvantaged (TEA, 2012).

A college degree leads to financial security and success for an individual; therefore, as minority groups continue to grow, we must find greater achievement for their educational attainments by closing achievement gaps. Society, as a whole, will benefit from closing the achievement gaps, as our present situation of producing fewer educated people will be detrimental to our country's continued triumphs (Institute for Higher Education Policy, 2012).

The growing numbers of economically disadvantaged students are causing many educational leaders to look to support programs such as the AVID program. AVID is particularly designed to close the learning gaps for economically disadvantaged and First Generation College bound students. The educational leaders are considered to be the best suited to have the greatest impact on student learning; therefore, the educational leaders must continentally evaluate educational programs for outcomes that can have the greatest impact on closing the achievement gaps for economically disadvantaged students.

Summary of the Study

The purpose of the study is to determine if significant differences exist between AVID students and non-AVID students, in grades 9-12 regarding whether they achieved math and English TAKS commended status, PSAT scores, frequency of AP exams taken, and AP exam scores. This study also sought the perceptions of AVID educators on the effectiveness the AVID program in closing the achievement gap. This study evaluated the effectiveness of a secondary AVID program on students' college readiness.

The students' demographic and achievement data from the graduating classes of 2011, 2012, and 2013, were provided by the participating school district via an Excel spreadsheet. The data had all identifying information removed by the school district prior to being given to the researcher. The data were organized and analyzed in four ways. In the first method, the students were separated by participation or non-participation in the AVID program and compared using a parametric independent samples two-tail t-test with the students scores on PSAT critical reading, math, writing skills, composite score on critical reading, math, and writing, critical reading national percentiles, math national percentiles, writing national percentiles, and AP exam scores. In the second method, students were examined using a parametric dependent samples two-tail matched-pairs t-test where the AVID and non-AVID students were matched by gender, ethnicity, economically disadvantaged, and at-risk status were used to match students and then evaluated for significant differences on the students scores on PSAT critical reading, math, writing skills, composite score on critical reading, math, and writing, critical reading national percentiles, math national percentiles, writing national percentiles, and AP exam scores.. In the third method, the students were separated by participation or

non-participation in the AVID program and compared using a Pearson chi-square analysis with the frequency of the AP exam taken, PSAT college readiness benchmark indicator, English TAKS commended achievement status, and math TAKS commended achievement status. In the fourth method, students were examined using a Pearson chi-square, matched-pair analysis with the frequency of the AP exam taken, PSAT college readiness benchmark indicator, English TAKS commended achievement status, and math TAKS commended achievement status and where the AVID and non-AVID students were matched by gender, ethnicity, economically disadvantaged, and at-risk status were used to match students and then evaluated for significant differences.

The qualitative area of the study gathered the beliefs of AVID educators including AVID teachers, AVID coordinator, and campus principal through an interview process. Eighteen questions were used to help facilitate the educators' beliefs on the effectiveness and critical components of the AVID program.

Discussion of Findings

The researcher sought to study the effects of the AVID program on students' college readiness with the use of college readiness indicators and the beliefs of AVID educators. The following were the research questions examined in the study:

1. Do statistical differences exist between AVID students and non-AVID students regarding whether they achieved math and English TAKS commended status?
2. Do statistical differences exist between AVID students and with non-AVID students on PSAT scores?

3. Do statistical differences exist between AVID students and with non-AVID students with their frequency of AP exams taken?
4. Do statistical differences exist between AVID students and with non-AVID students with their scores on AP exams?
5. What are the beliefs of teachers, the AVID coordinator, and the principal regarding the effectiveness of the AVID program?

Significant Differences

Out of twenty-four college readiness indicators, nineteen were found to have significant differences when comparing AVID students to non-AVID students. Both non-matched and matched paired, math TAKS commended achievements analysis exposed non-AVID students, as out performing AVID students. Furthermore, both non-matched and matched paired, PSAT results showed significant differences between non-AVID students outgaining AVID students in all areas, except one. This one exception was with non-matched, writing skill scores that did not show a statistical significance but the non-AVID students still scored slightly higher than AVID students. Moreover, non-matched AVID students showed significantly lower scores than non-AVID students on their AP exams.

Conversely, AVID students who were matched to non-AVID students based on ethnicity, gender, at-risk status, and economically disadvantaged status took significantly more AP exams than non-AVID students. Interestingly, though not significantly different, AVID students did take slightly more AP exams when compared to non-AVID students.

It would be easy to dismiss AVID as a viable program due to the finding of this study. However, the program was formed to help impact economically disadvantaged and First Generation College bound students by closing the achievement gap. This study does not show the impact that may have occurred from the AVID program, where an AVID student started and then ultimately finished with their educational attainment upon their high school graduation. Closing the achievement gap for economically disadvantaged and First Generation College bound students should be the focus and not necessarily having the AVID reach the same achievement levels as college bound students with support structures.

It is important to note that any program is hard pressed to correct the inconsistences associated with economically disadvantaged students and their home lives. As Hart and Risley (1995) found, low-income, non-college graduate parents use a vocabulary base of 525 words with their children while professional, college educated parents used an average of 1,100 vocabulary words. Additionally, the mere interactions between economically disadvantaged parents and their children were found to be far more likely to be negative in nature than a typical college educated parent and their children. When it comes to low-income families, with every word, more and the environment creates more of an educational gap in which they live (Hart & Risley, 1995). Additionally, economically disadvantaged parents, in part, further confound the educational attainment levels of their children. First Generation College bound students were found to have a significant disadvantage in intellectual and social aspects when compared to students whose parents have attained higher levels of education (Cota-Robles et al., 1999; Cushman, 2007; Jacobson & Mokher, 2009; Noguera, 2012; Padgett

et al., 2012). However, it is interesting to note, this study found no significant difference in the PSAT critical reading component by which the AVID students did almost as well as non-AVID students.

No Significant Differences

Five analyzed college readiness indicators, as shown in Chart 5.1 and Chart 5.2, demonstrate no significant differences when comparing AVID students to non-AVID students. Both non-matched and matched paired, English TAKS commended achievement evaluations showed non-AVID and AVID students achievements were about the same, with non-AVID students slightly ahead. Furthermore, non-AVID students scored marginally higher than non-matched, AVID students on PSAT writing skill scores. Additionally, non-AVID students scored marginally higher than matched paired AVID students on AP exams. However, AVID students took slightly more AP exams when compared to matched-pairs, non-AVID students.

Chart 5.1

College Readiness Indicators Percentages with No Significant Differences

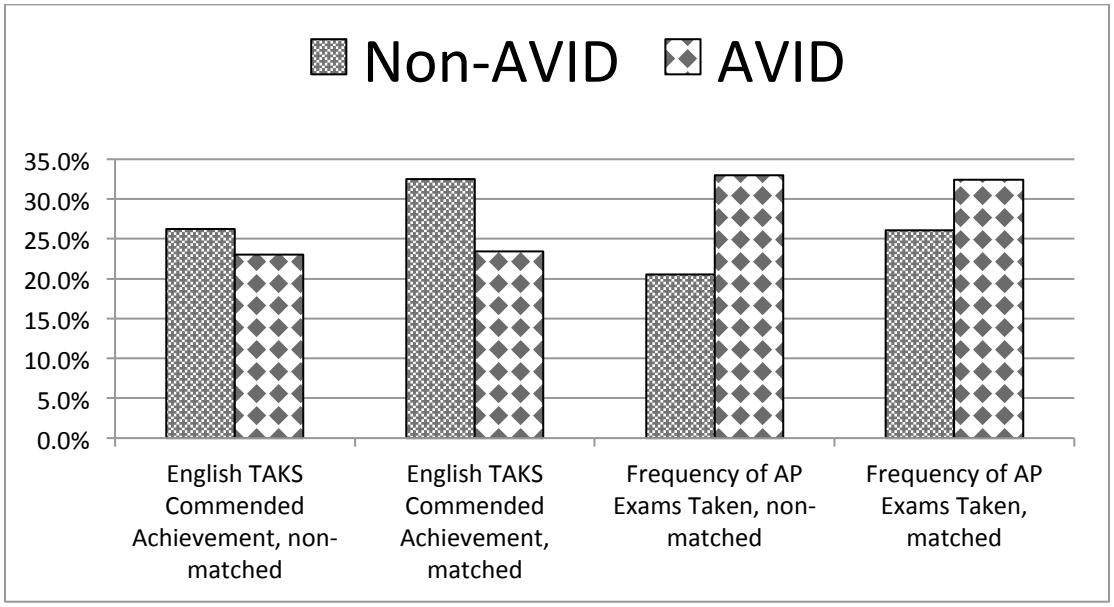
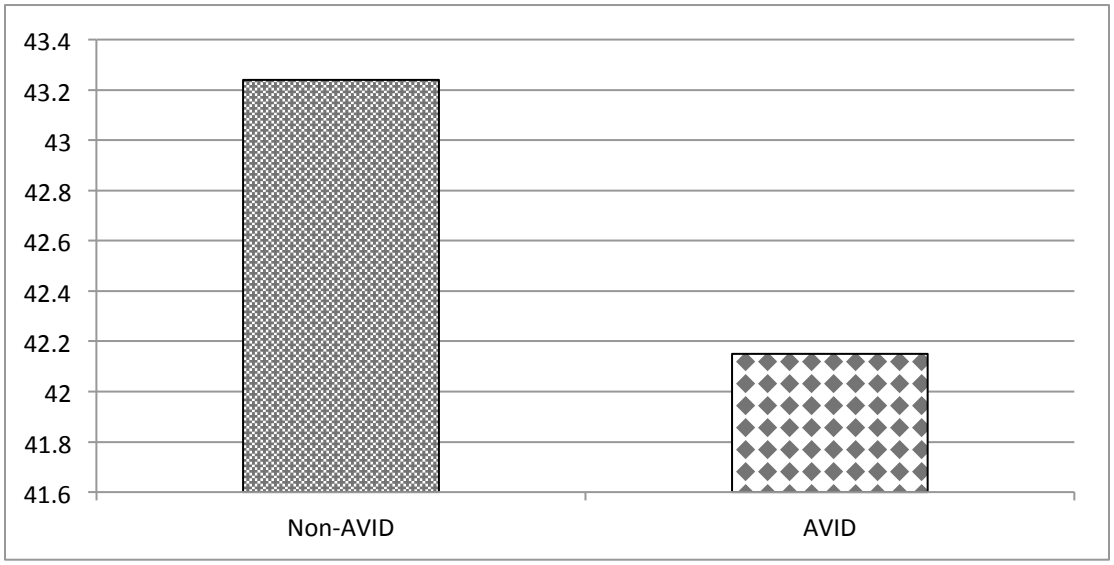


Chart 5.2

PSAT Writing Skill Scores, non-matched with No Significant Differences



While these scores may be defined as no significant difference, it is important to consider this a profound achievement by the AVID students, teachers, and the AVID

program. The findings of this analysis showed the achievement gap for the AVID students was not only narrowed, but the achievement gap was closed. As Martinez et al., (2005) found, AVID places an emphasis on closing achievement gaps and increasing college preparedness (Martinez et al., 2005).

AVID Interview Findings

While interviewing the AVID educators for this study several interesting findings were discovered. Providing substantive quality and teacher driven professional development must support increasing teacher effectiveness with the final goal of furthering student achievement (Burton, Whitman, Yepes-Baraya, & Kim, 2002; Institute for Higher Education Policy, 2012; President's Advisory Commission on Educational Excellence for Hispanic Americans, 2003). All of the participants believed they were provided with significant professional development from the district, AVID Summer Institute, and the AVID website that ultimately led to a very effective environment in the AVID elective classroom. However, the participants believed they we not fully prepared to teach their first year of the AVID elective class.

The participants' responses centered on three aspects, as to what was most important from the AVID essential elements, which included student selection, rigorous course work and the AVID tutoring process. The participants' perceptions of the AVID students showed how the AVID elective teachers wished the student came into the program fully motivated to advance their knowledge and skills to be ready for the rigors of college. Furthermore, the participants reported if the AVID students are not intrinsically motivated then the other AVID essential elements are not as effective. As

Borman et al. (2000) stated minority students disengage from their learning at faster rates than whites that score within the same achievement levels (Borman et al., 2000).

When the participants were asked, what about the AVID program is vital to developing a college ready student, they responded with the AVID tutoring process and the critical thinking associated with advanced course work. Interesting to note, since both of these responses are AVID essential elements.

As related to what methods were used to affect the college readiness indicators used in this study, the results were mixed. Some educators used supplemental materials, like vocabulary words to prepare students for the PSAT, while other relied in the tutoring process to enhance the learning outcomes with PSAT and AP exams. None of the participants considered the commended ratings for the TAKS test to be a relevant element to strive for with the AVID students but did spend time prior to each TAKS test stressing the importance of preparing and passing the TAKS test.

One of the most critical questions asked of the AVID educators was their belief as to what helps an AVID student become college ready. The tutoring process was cited by four of the participants as the most beneficial to creating a college bound student, while two of the participants stated the rigorous classes associated with advanced coursework as the major contributor to being college ready. Last, one participant believed writing and peer editing college essays was the critical component for college readiness.

Interesting and varied viewpoints were found when asking the participants about campus administrative support. Only two of the participant believed the campus administration was very supportive of the AVID program. However, three of the participants did not directly state the campus administration was not supportive but

blamed the high turnover rate for AVID elective teachers as the systemic problem at the campus level. Two of the participants believed at one time the campus administration was strong but has slowly weakened with support of the AVID program over the past few years.

When transitioning over whether district level support was strong or weak, the responses were even more varied compared to the campus level of support question. Two participants believed the district was supporting the AVID program as well as it can. One participant believed the AVID coordinator was overworked by other responsibilities. One participant believed the district was moving away from the AVID program due to the high costs. One participant believed there was a problem with the middle school feeder schools and how they enrolled students into AVID.

Future research

Additional research areas were found, during this study that could lead to added insight into the effectiveness of the AVID program on students' college readiness. The following recommendations for research are suggested:

1. This study could be replicated with different high schools.
2. College bound AVID students should be tracked for college graduation completion rates and compared to other non-AVID college bound students from similar backgrounds from this high school.
3. Some of the participants' perceptions showed some AVID students were not motivated to advance their educational attainments. Further research is recommended to further understand what motivated economically disadvantaged student who are selected for an AVID program.

4. The researcher removed eleven AVID students from the matched pair analysis due to no suitable match to a non-AVID student with regards to PSAT scores. Further research is required to investigate the AVID recruiting methods on this high school campus. With regards to the PSAT, not being able to find eleven AVID students that could match up to any non-AVID student would represent the ability of this program to find those economically disadvantaged students and fold them into a college-going atmosphere.
5. However, the researcher removed 59 AVID students from the PSAT scores, matched pairs analysis due to no reported PSAT scores. Additional research is required to investigate why many AVID students were not taking the PSAT exam.
6. As noted by the AVID educator interviews, being exposed to college bound support system is vital to closing the achievement gaps for economically disadvantaged students. However, with regards to the frequency of AP exam taken, a low number of AVID students with only 59 taking the AP exam should be cause for further examination. Furthermore, the researcher removed 119 AVID students from the AP scores analysis due to no reported results. Even though, percentagewise more AVID students took the AP exam, further research is required to investigate why many AVID students were not taking an AP exam.

Conclusions and recommendations

As Whitaker (2012) found, programs being considered good or bad is not what is most important, but teacher effectiveness is what is important. Whitaker stated effective teachers in the classroom are what matter most to increasing the educational achievements of students (Whitaker, 2012). However, school leaders cannot solely leave it to the teachers to affect a college bound climate and closing the achievement gap for minority and economically disadvantaged students. Goals and expectations for faculty and staff are necessary to creating or maintaining a strong learning campus wide environment, along with supportive encouragements for risk-taking from the campus administration (Sparks & Loucks-Horsley, 1989; Beavers, 2009). With that being said, where this study was conducted there appears to be some disconnect between the campus administration and the beliefs of the AVID elective teachers.

This campus where the study was conducted has had significant turnover at the administration level for a number of years, and, as a study by Kythreotis and Pashiardis (2006) found, frequent movement of administration can negatively affect a school's climate. Furthermore, the process of either building or maintaining a positive school culture was directly tied to the leadership style of the principal (Kythreotis & Pashiardis 2006). It is recommended that administrator inspiration is critical to support economically disadvantaged and First Generation College bound students that need the added support structures that can lead to these students being college ready upon their high school graduation. However, this campus just added an assistant principal with a significant AVID background, and this change and potential support has not had time to permeate to the AVID elective teachers. It is recommended that the newly hired assistant principal,

that has an AVID background be allowed to develop the AVID program on this campus along with stymying the high turnover rate of the AVID elective teachers.

Martinez and Klopott (2003) reported the best way to create a college going atmosphere was to communicate clearly and often to students and parents with information about college (Martinez & Klopott, 2003). It was clear from the AVID educator responses that college information and the importance of the various AVID essential elements was in the forefront of discussions with AVID students. Perhaps as Martinex and Klopott (2003) described the parents need to play a vital role in furthering the college going discussions.

Padgett et al. (2012) found that college-educated parents pass down skills, attitudes, and interests to their children. Borman et al., (2000) found that ethnicity had nothing to do with student success or lack of success but was tied to the educational level of the child's parents. High achieving minority parents held their children to the same elevated academic expectations as highly educated non-minority parents (Borman et al., 2000).

Nevertheless, there are gaps with economically disadvantaged students (Noguera, 2012). Noguera (2012) revealed several "gaps" in the various aspects of a child's educational experiences. Noguera (2012) expressed the "parent gap" as a problem where more affluent parents could provide their children more opportunities than poorer, less-educated parents (Noguera, 2012). Therefore, it is recommended that parents should be integrated more in to the college bound process of AVID.

Gandara and Bial (2001) found that creating and maintaining a school climate set with the expectation of students will go to college was the best way to affect the college

bound outcomes. Gandara and Bial (2001) found the need for a strong and structured curriculum with the addition of required tutorials to be a critical element for college bound students. The study realized short-term interventions did very little to affect student achievements but long-term investments in a college bound program was most beneficial (Gandara & Bial, 2001). Additionally, providing a key person, like a mentor, teacher, or counselor, to guide a student over the child's secondary education provided a stable base for postsecondary attendance. Adelman (2006) supports the mentor option and stated in a report that providing a mentor would help all students but can be most beneficial to Latinos and African Americans. Klofenstein (2003) concluded that Latinos and African Americans need increased mentoring of the potential benefits of strenuous high school course work for pathways to college to become available. Consequently, it is recommended that the high school campus continue to use the core component of the AVID program that provides a mentor or AVID elective teacher to help guide students to achieve in demanding classes and eventually enter college fully prepared to handle the rigorous coursework.

Due to the responses of the AVID educators, it is recommended that professional development be required when selecting new AVID elective teachers. As one of the AVID elective teachers stated from the interviews, "you are never fully prepared to teach anything for the first time." Additionally, it is recommended that continuous professional development be required for current AVID elective teachers. It is recommended that the use of the AVID essential elements be a fundamental part of any successful AVID program.

Due to the varied responses of the AVID educators in this study, it is recommended that a more developed college readiness indicator preparation program be developed and used by all AVID elective teachers. A cohesive college readiness indicator preparation program will allow for collaboration and a benchmark to later examine its effectiveness. Furthermore, the data gained can then be shared back with the AVID students, as to keep them involved with their continued successes or addressing areas of achievement concerns.

Students participating in AP courses as well as taking the corresponding AP exam outperformed and had on average higher college graduation rates than other college students with no AP experiences (Adelman, 2006; Challenge Success, 2013; King, 1996; Santoli, 2002; Warburton, Bugarin, & Nunez, 2001). As noted by the AVID educators the tutoring process helped student be prepared to handle the rigorous coursework; it is recommended that AVID tutoring process continue, as tutoring is also a required AVID essential element.

The AVID educators from this research study alluded to student motivation being a large factor in college bound work ethic. It is recommended that counselors and administrators direct conversations with students and their parents when registering for high school classes about how advanced course work will prepare them for college but immense effort is necessary on the student's part.

This research study found that the AVID program can influence the achievement gaps in isolated areas (i.e., AP exam frequency) of our economically disadvantaged and First Generation College bound students for the better. The AVID mission statement expresses a desire "to close the achievement gap by preparing all students for college

readiness and success in a global society" (AVID's Mission, n.d.), and this researcher believes the AVID program provides a solid structure to deliver the opportunity to focus in on a college bound culture. However, for the most part this research study did not find that the AVID program located at this high school campus had significantly increased the college readiness of its AVID students.

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APPENDIX A
IRB APPROVAL LETTER

UNIVERSITY of HOUSTON

DIVISION OF RESEARCH

April 22, 2015

Jonathan Campbell
c/o Dr. Steven Busch
Dean, Education

Dear Jonathan Campbell,

Based upon your request for exempt status, an administrative review of your research proposal entitled "The Influence of the Advancement Via Individual Determination (AVID) Program on Student Performance Measured by College Readiness Standards" was conducted on February 25, 2015.

At that time, your request for exemption under **Category 2** was approved pending modification of your proposed procedures/documents.

The changes you have made adequately respond to the identified contingencies. As long as you continue using procedures described in this project, you do not have to reapply for review. * Any modification of this approved protocol will require review and further approval. Please contact me to ascertain the appropriate mechanism.

If you have any questions, please contact Alicia Vargas at (713) 743-9215.

Sincerely yours,

Kirstin Rochford, MPH, CIP, CPIA
Director, Research Compliance

*Approvals for exempt protocols will be valid for 5 years beyond the approval date. Approval for this project will expire **August 25, 2019**. If the project is completed prior to this date, a final report should be filed to close the protocol. If the project will continue after this date, you will need to reapply for approval if you wish to avoid an interruption of your data collection.

Protocol Number: 14248-EX

APPENDIX B
HUMBLE ISD APPROVAL LETTER

Accountability, Assessment, and Research
Humble ISD
Humble, Texas

April 6, 2015

Dear Mr. Campbell,

Thank you for your interest in conducting research in Humble ISD. We are grateful that you considered us. I am happy to inform you that your proposal number 121813a, entitled "Program Evaluation of the Advancement Via Individual Determination Program on High School Student Achievement" has been approved, which includes access to masked data for three cohorts of students at Atascocita High School (2011-2013), including gender, race/ethnicity, socio-economic status, AVID participation, 11th grade TAKS Math and English scores, 10th grade PSAT scores, the number of AP exams taken, and scores on AP exams. You will be responsible for keeping all personally identifiable data secure per best practices and destroying any personally identifiable documentation by August 1, 2015 (for examples, see http://csrc.nist.gov/publications/nistpubs/800-122/sp800-122.pdf).
In addition, you may conduct interviews of AVID teachers at Atascocita High School. Permission has been granted by the building principal for their participation.

The proposed study should prove to be a useful contribution to improving Humble ISD, as well as a contribution to the practice of program evaluation.

As part of the research process, you will continue to consult with district staff and this office, as needed, and follow the guidelines of your institution's human subjects committee. This office will provide you with a masked dataset containing the variables outlined above.

If you have any questions, please do not hesitate to contact me.

Best wishes,

Warren Roane, Ph.D.
Director of Accountability, Assessment, and Research
Humble ISD
281-641-8124
warren.roane@humble.k12.tx.us

APPENDIX C
CONSENT TO PARTICIPATE IN RESEARCH

UNIVERSITY OF HOUSTON
CONSENT TO PARTICIPATE IN RESEARCH

PROJECT TITLE: The Influence of the Advancement Via Individual Determination (AVID) Program on Student Performance Measured by College Readiness Standards

You are being invited to take part in a research project conducted by Jonathan Campbell from the Educational Professional Leadership Department (Executive Ed.D) at the University of Houston. This research project is being conducted as part of a degree requirement under the supervision of Dr. Busch, Professional Leadership Instructor with University of Houston. This project has been reviewed by the University of Houston Committee for the Protection of Human Subjects (713) 743-9204. This research will determine the influence of the AVID Program with preparing students for college.

NON-PARTICIPATION STATEMENT

Taking part in the research project is voluntary and you may refuse to take part or withdraw at any time without penalty or loss of benefits to which you are otherwise entitled. You may also refuse to answer any research-related questions that make you uncomfortable.

PURPOSE OF THE STUDY

The purpose of the study is to gain your input on if the AVID Program helped advance the academic achievements of AVID students and their readiness for college. One interview will be conducted which will take approximately 45-minutes to complete. The questions will ask for your feedback and knowledge on how the AVID Program prepares students for college.

PROCEDURES

You will be one of approximately six subjects invited to take part in this project at one location, Atascocita High School.

You will be asked eighteen open-ended questions based on gathering your views of the AVID Program an its ability to influence college ready students who participated in the an AVID elective class.

CONFIDENTIALITY

Your identity will remain confidential. Every effort will be made to maintain the confidentiality of your participation in this project. Each subject's name will be paired with a code number by the principal investigator. This code number will appear on all written materials. The list pairing the subject's name to the assigned code number will be kept separate from all research materials and will be available only to the principal investigator. Confidentiality will be maintained within legal limits.

RISKS/DISCOMFORTS

There are no foreseeable risks with the intended interview questions.

BENEFITS

While you will not directly benefit from participation, your participation may help investigators better understand how the AVID Program influences student college readiness.

ALTERNATIVES

Participation in this project is voluntary and the only alternative to this project is non-participation.

PUBLICATION STATEMENT

The results of this study may be published in scientific journals, professional publications, or educational presentations; however, no individual subject will be identified.

AGREEMENT FOR THE USE OF AUDIO TAPES

If you consent to take part in this study, please indicate whether you agree to be audio recorded during the interview by checking the appropriate box below. If you agree, please also indicate whether the audio recordings can be used for publication/presentations.

- ☐ I agree to be audio recorded during the interview.
  - ☐ I agree that the audio recording(s) can be used in publication/presentations.
  - ☐ I do not agree that the audio recording(s) can be used in publication/presentations.
- ☐ I do not agree to be audio recoreded during the interview.

You may still participate in the research interview if you select not to being audio recorded.

SUBJECT RIGHTS

1. I understand that informed consent is required of all persons participating in this project.

2. I have been told that I may refuse to participate or to stop my participation in this project at any time before or during the project. I may also refuse to answer any question.

3. Any risks and/or discomforts have been explained to me.

4. I understand the protections in place to safeguard any personally identifiable information related to my participation.

5. I understand that, if I have any questions, I may contact Jonathan Campbell at 713-269-2487. I may also contact Dr. Busch, faculty sponsor, at 713-743-3902.

6. **Any questions regarding my rights as a research subject may be addressed to the University of Houston Committee for the Protection of Human Subjects (713-743-**

9204). All research projects that are carried out by Investigators at the University of Houston are governed be requirements of the University and the federal government.

SIGNATURES

I have read (or have had read to me) the contents of this consent form and have been encouraged to ask questions. I have received answers to my questions to my satisfaction. I give my consent to participate in this study, and have been provided with a copy of this form for my records and in case I have questions as the research progresses.

Study Subject (print name): _____

Signature of Study Subject: _____

Date: _____

I have read this form to the subject and/or the subject has read this form. An explanation of the research was provided and questions from the subject were solicited and answered to the subject's satisfaction. In my judgment, the subject has demonstrated comprehension of the information.

Principal Investigator (print name and title):_____

Signature of Principal Investigator: _____

Date: _____